UNIV. OF
TORONTO
LIBRARY

4742

THE

CANADIAN JOURNAL

OF

MEDICINE AND SURGERY

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF MEDICINE AND SURGERY

J. J. CASSIDY, M.D., EDITOR.

126643
5/3/13

VOL. XXIX

JANUARY TO JUNE, 1911

BUSINESS MANAGER
W. A. YOUNG, M.D., L.R.C.P. (LOND.),
145 COLLEGE ST., TORONTO, CAN.

1911

January

ORIGINAL CONTRIBUTIONS

Infantile Spinal Paralysis: Special Reference to Treatment. By B. E. McKenzie, B.A., M.D. 1
Acute Poliomyelitis. By Clarence L. Starr, M.D. 31

EDITORIALS.

The Medical Inspection of Immigrants to Canada 50
Syphilis as the Etiological Factor in General Paresis 52
Relation between Functional and Organic Nervous Diseases 54
To Restrict the Sale of Cocaine ... 56
The Medical Council Elections 58

THE PHYSICIAN'S LIBRARY.

Applied Anatomy. By Gwilym G. Davis 59
Atlas of Pathological Anatomy. By the late Prof. Dr. Alfred Kast. 60
Lippincott's New Medical Dictionary 61
Some Posological Hints and Other Useful Information 61
The Physician's Pocket Account Book. By J. J. Taylor, M.D. .. 61
The Extra Pharmacopeia 62

February

ORIGINAL CONTRIBUTIONS

Clinical Points Relating to Bright's Disease. By H. B. Anderson, M.D., L.R.C.P., London 63
The Therapeutic Effect of Suggestion. By Ernest Jones, M.D., London 78
Chronic Progressive Deafness. By Charles M. Stewart, M.D. 88

EDITORIALS.

Poisoning by Mercuric Chloride through Vaginal Douches 99
The Surgical Anatomy of the Facial Vein 100
Respecting Foreign-Born Consumptives at the Toronto Free Hospital for Consumptives 102
The Infantile Mortality Rate of Ontario in 1908 103
The Practice of "Fee Splitting" between the Physician and the Surgeon 107

THE PHYSICIAN'S LIBRARY.

International Clinics. Edited by Henry W. Cattell, A.M. 117
Gynecologie operatoire. By Henri Hartmann 117
Osteology and Syndesmology. By Howard A. Sutton, A.B. 118
Military Hygiene. By R. Caldwell, F.R.C.S. 118
The Practitioner's Medical Dictionary. By George M. Gould, A.M. 119
Medical Chaos and Crime. By Norman Barnesby, M.D. 120
Uric Acid in the Clinic. By Alexander Haig, M.A., and Kenneth G. Haig, L.R.C.P., London 120
The Practical Medicine Series. By Gustavus P. Head, M.D., and Charles L. Mix, A.M. 121
The Diseases of Women. By J. Bland Sutton, F.R.C.S., and Arthur E. Giles, M.D. 121
The Medical Record Visiting List, or Physician's Diary for 1911 .. 122
The Ontario Public School Hygiene. By A. P. Knight, M.A. 122
Martindale & Westcott's Extra Pharmacopeia 122
Dislocations and Joint Fractures. By Frederic J. Cotton, A.M. .. 123

March

ORIGINAL CONTRIBUTIONS.

Observations on Fractures. By Herbert P. H. Galloway, M.D. 125
A Skin Eruption in Six Consecutive Cases of Poliomyelitis. By Dr. Alan G. Brown 134

SELECTED ARTICLES.

Bright's Disease, it's Treatment .. 137

EDITORIALS.

Healthful Homes Reduce Tuberculosis Among Working Classes. 140
Alcoholism a Cause of Degeneracy. 142
To Prevent Phosphornecrosis in Canada 145
The Proposed Amendment to the Ontario Medical Act 147
The Academy of Medicine, Toronto 153
Further Additions to Our Staff ... 154
Associate Editor in our Department "Militia and Naval Medical Services and Ambulance" 155

NEWS OF THE MONTH.

Bill—An Act to Amend "The Ontario Medical Act" 156
The Resignation of Dr. J. N. E. Brown from Toronto General Hospital 157
Tentative Programme of the Canadian Hospital Association 159
The Goderich Medical Association. 160
The Chief Medical Inspectorship of Toronto Public Schools 161
Homewood Sanitarium to be Rebuilt 161
The New Ontario Provincial Board of Health 161
Public Health Exhibit 162

THE PHYSICIAN'S LIBRARY.

The Ship Surgeon's Handbook. By A. Vavasour Elder, M.R.C.S. .. 163
Hemoglobinuria. By Ambrose E. L. Charpentier 163
Surgery of Childhood, including Orthopedic Surgery. By Dr. Forest Willard, A.M., M.D., Ph.D. 164
Golden Rules for Diseases of Infants and Children. By George Carpenter, M.D. 165
Heart Disease, Blood Pressure, and the Nauheim-Schott Treatment. By Louis Fangeres Bishop, A.M., M.D. 165

R 11 C38 v.29

Sprains and Alleged Injuries of Joints. By R. H. Anglin Whitelocke, F.R.C.S. 166
Medical Supervision in Schools. By Edward Millar Steven, M.B. .. 167
Accidents in Their Medico-Legal Aspect. By Leading Medical and Surgical Authorities 168
Diseases of the Joints and Spine. By Howard Marsh, F.R.C.S. .. 169
Literary Notes 170
Arthritis Deformans, comprising Rheumatoid Arthritis, Osteo-arthritis and Spondylitis Deformans. By R. Llewellyn Jones, M.B. 171
On Acute Intestinal Toxemia in Infants. By Ralph Vincent, M.D. 172
A Handbook of Intestinal Surgery. By Leonard A. Bidwell, F.R.C.S. 173
The Ear and its Diseases. By Albert A. Gray, M.D. 173
State Board Examination Questions and Answers of Forty-one States and two Canadian Provinces .. 174
The Treatment of Disease. By Reynold Webb Wilcox, M.A., M.D. 174
Précis du Traitement des Fractures, par le Massage et la Mobilisation, par le Dr. Just Lucas-Championniere 175
A Compend of the Active Principles. By Harold Hamilton Redfield, A.B., M.D. 176
Diseases of the Pancreas: Cause and Nature. By Eugene L. Opie .. 176
Food and Feeding in Health and Disease. By Chalmers Watson, M.D., F.R.C.P. 177
A New Booklet on Treatment of Diseases of the Ear, Nose, Throat and Lungs 178
Dawn of the Fourth Era in Surgery. By Robt. T. Morris, M.D. 178
Practical Bacteriology. By E. R. Stitt, A.B., Ph.G., M.D. 179
Salvarsan or "606." By W. Harrison Martindale, Ph.D. and others 179
The Problem of Race Betterment. By J. Ewing Mears, M.D. .. 180
Medical Supervision in Schools. By Edward Miller Steven, M.B. .. 180
Diseases of the Stomach and Upper Alimentary Tract. By Anthony Bassler, M.D. 181
La Vieillesse. Par le Dr. A. Lorand 182
Syphilis: Its Diagnosis and Treatment. By F. J. Lambkin, Col. R.A.M.C. 182
Lessons on the Eye. By Frank L. Henderson, M.D. 183
The Sexual Disabilities of Man and Their Treatment. By Arthur Cooper 183
World Corporation. By K. C. Gillette 184
Annales de Gynécologie et d'Obstétrique 185
The Practical Medicine Series 185
Vaccine Therapy: Its Administration, Value and Limitations .. 186
Grape Juice—Its Food Value 186

April

ORIGINAL CONTRIBUTIONS.

Report of a Case of Neurasthenia Terminating in Insanity. By Campbell Meyers, M.D. 187
Notes on a Case of the Direct Transfusion of Blood for Secondary Hemorrhage. By Alexander Primrose, M.B., C.M. 193

EYE, EAR AND NOSE.

Clinic—Oto-Laryngology. By D. J. Gibb Wishart, Toronto 196

SELECTED ARTICLES.

First Death from Chloroform at Toronto General Hospital. (By courtesy of Dr. Joseph Graham, Toronto) 206

EDITORIALS.

Unusual Causes of Intestinal Obstruction 214
Chronic Carriers of Typhoid Fever 216
The Ontario Milk Act 219
Doctor, Does This Mean You? 223
The Academy of Medicine 225

OBITUARY.

Robert Lovell Gibson 226

NEWS OF THE MONTH.

Ontario Medical Association 228
A Public Health Exhibit 231
Eleventh Annual Meeting 232
Sanitary Burial 232

BOOK REVIEWS.

Cystoscopy, As Adjuvant in Surgery. By Staff-Surgeon Dr. O. Rumpel 234
Anæmia. By Geh. Obermidizinalrat Prof. Dr. P. Ehrlich, Director of the Konigl Institute for Experimental Therapie, Frankfurt-A.-M., and Dr. A. Lazarus, Professor of the University of Berlin-Charlottenburg 234
Induced Cell-Reproduction and Cancer. By Hugh Campbell Ross and John Westray Cropper 235
Treatise on Diseases of the Skin. By Henry W. Stelwagon, M.D., Ph.D. 236
Diagnosis and Treatment of Diseases of Women. By Harry Sturgeon Crossen, M.D. 236
A Handbook of Practical Treatment. By 79 eminent specialists 237
Radium, Its Physics and Therapeutics. By Dawson Turner, B.A., M.D. 238
The Encyclopedia Britannica 239
The Stereo-Clinic.—Kelly 241
The Modern Treatment of Alcoholism and Drug Narcotism. By C. A. McBride, M.D. 242
Dyspepsia; Its Varieties and Treatment. By W. Soltau Fenwick, M.D., London 242
Hydrotherapy: Its General Application to Special Affections and the Technic or Processes Employed. By Guy Hinsdale, A.M., M.D. 243
Vicious Circles in Disease. By Jamieson B. Hurry, M.A., M.D. 244
A Manual of Physical Diagnosis. By Brefney Rolph O'Reilly, M.D. . 244
Bismuth Paste in Chronic Suppurations. By Emil G. Beck, M.D. 245
A New Medical Journal, "Paris Medical" 246
An English edition of "Hartmann's Operative Gynecology" 246
Dr. Skinner's Post Graduate 246

May

ORIGINAL CONTRIBUTIONS.

Observations on Simple Goitre occurring at Puberty, with special reference to the use of thyroid extract in its treatment. By Graham Chambers, M.B., Toronto 249
An Unusual Complication of Small Ovarian Cysts. By James F. W. Ross, M.D.C.M., and Arthur C. Hendrich, M.A., M.B. 254

EDITORIALS.

The Medical Profession and Osteopathy 258
Gastric Ulcer 261
An Act to Amend the Canada Medical Act 263
Personal 267

OBITUARY.

The late Dr Charles M. Stewart .. 269
Alexander Bethune 269
The late William Warren Potter, of Buffalo, N.Y. 269

NEWS OF THE MONTH.

Bill 15.—An Act to Amend the Canada Medical Act 270
Banquet to Dr. J. N. E. Brown, retiring Medical Superintendent, Toronto General Hospital 274
The New Toronto General Hospital. 278
The Academy of Medicine, Toronto. 285
Gold-headed Cane for Dr. Caulfield. 285
The Canadian Association for the Prevention of Tuberculosis ... 286
The Victor Electric Co.'s Removal. 286

THE PHYSICIAN'S LIBRARY.

Organic Analysis Chart. By W. Harrison Martindale, Ph.D., Marburg 288
Differential Diagnosis. By Richard C. Cabot, M.D. 288
Syphilis. By Sir Jonathan Hutchinson, F.R.S., LL.D., F.R.C.S. 289
Physiological Principles in Treatment. By W. Langdon Brown, M.A., M.D., F.R.C.P. 289
Text-Book of Medical and Pharmaceutical Chemistry. By Elias H. Bartley, B.S., M.D., Ph.G. 290
Mendel's Principles of Heredity. By W. Bateson, M.A., F.R.S., V.M.H. 290
Skin and Venereal Diseases 291
Compend of Gynecology. By William Hughes Wells, M.D. 291
Stereo-Clinic. By Dr. Howard A. Kelly, Baltimore, Md. 292
Memoranda on Poisons. By Thomas Hawkes Tanner, M.D., F.L.S. .. 292
Aids to Pathology. By Harry Campbell, M.D., B.S. 293
A Text-book of Veterinary Anatomy. By Septimus Sisson, S.B., V.S. . 293
Manual of Medicine. By Thomas Kirkpatrick Monro, M.A., M.D. . 294
Psyche. By Dr. Max Talmey, New York 294
The Practical Medicine Series 295
Biology—General and Medical. By Joseph McFarland, M.D. 296
Essentials of Histology. By Prof. E. A. Schafer, M.D., D.Sc. 296
Text-Book of General Bacteriology. By Prof. E. O. Jordan 297
Confidences. By Edith B. Lowry, M.D. 297
The Care and Training of Children. By Le Grand Kerr, M.D. 298
The Practical Medicine Series. By Joseh B. DeLee, M.A., M.D. ... 298
Heaton's Annual 298
State Board Questions and Answers. By R. Mas Goepp, M.D. 299
Christian Science in the Light of Holy Scripture. By I. M. Haldeman 299
Makers of Man; a Study of Human Initiative. By Chas. J. Whitby, M.D. 299
A Text-Book of Surgical Anatomy. By William F. Campbell, M.D... 300
A Handbook of Practical Treatment. By many writers 300
A Handbook of Obstetric Nursing, for Nurses, Students and Mothers By Anna M. Fullerton, M.D. 301
Medical Service in Campaign. By Major Paul Frederick Straub.. 301
Diseases of Children, for Nurses. By Robt. S. McCombs, M.D. ... 302
Accidental Injuries to Workmen. By H. Norman Barnett, F.R.C.S. .. 302
American Red Cross Abridged Text-Book on First Aid, Industrial Edition. By Major Chas. Lynch. 303
Hints for the General Practitioner in Rhinology and Laryngology. By Dr. Johann Fein 303
The Official Announcement of the University of Vienna 304
Inebriety. By T. D. Crothers, M.D. 304
Phases of Evolution and Heredity. By David Berry Hart, M.D. .. 305
The Practice of Surgery. By James Gregory Mumford, M.D. 305
After-Results of Abdominal Operations. By Arthur E. Giles, M.D. 306
Military Sanitation and Hygiene. By E. Blake Knox, B.A., M.D. 307
Case Histories in Pediatrics. By John Lovett Morse, A.M., M.D. 308

June

ORIGINAL CONTRIBUTIONS.

Strangulated Hernia. By Wallace C. Abbott, M.D., Chicago, Ill. .. 311
A Case of Clinical Interest. By Herbert W. Baker, M.D., Toronto 316
Military and Naval Medical Services and Ambulance 318
Medicine 325
Ear, Eye and Nose 328

EDITORIALS.

Education in Regard to Consumption 338
Animal Tuberculosis and Public Health 341
Mortality from Puerperal Septicemia in Ontario 343
The Wellesley Private Hospital ... 347
News of the Month 351
Correspondence 354

OBITUARY.

Death of Dr. D. A. Sinclair 350

THE PHYSICIAN'S LIBRARY.

A Manual of Cystoscopy. By J. Bentley Squier, M.D. 357
Clinical Symptomatology. By Alois Pick, Professor of Medicine, University of Vienna, and Adolph Hecht, Pediatrician, St. Anne's Hospital, Vienna 357

The Canadian Journal of Medicine and Surgery

A Journal published monthly in the interests of Medicine and Surgery

Vol. XXIX TORONTO, JANUARY, 1911 No. 1

Original Contributions

INFANTILE SPINAL PARALYSIS; SPECIAL REFERENCE TO TREATMENT

B. E. McKenzie, B.A., M.D.
Senior Surgeon, Toronto Orthopedic Hospital.

The fact that numerous epidemics of infantile spinal paralysis have occurred both in Europe and America in recent years has caused much attention to be given to the study and treatment of this affection. In the various sections of the Congress of American Physicians and Surgeons at Washington in 1910 acute anterior poliomyelitis received more attention than any other subject.

An extensive epidemic occurred in Sweden and Norway in 1905, which was carefully studied by Wickham and by Geirsvold, fifteen hundred cases being observed. The epidemic of 1907 in greater New York was the most extensive yet recorded, when it is said that more than twenty-five hundred cases occurred. In these epidemics and some others of less extent there has been afforded an unsurpassed opportunity for the study of the disease in all its bearings. The work of investigation and study of the New York epidemic was undertaken by a joint committee, on which Neurology, Pediatries, Orthopedic Surgery and the Board of Health were represented. Dr. Flexner, of the Rockefeller Institute, was also made a member of the committee.

ETIOLOGY.

Until comparatively recent years the disease was generally considered non-infectious. It is now considered an infectious disease, which is mildly contagious. Many epidemics have occurred in recent years. Whether the disease appeared in epidemics as frequently in former times, or whether it passed unrecognized, is doubtful. Certain it is that prominent writers toward the end of the last century failed to present it in that light. Beside occurring in epidemics, sporadic cases are being constantly observed. When the disease prevails in epidemic form it is generally more severe, and the mortality rate is higher. Colmer, in 1843, in the *American Journal of the Medical Sciences,* was probably the first to record the occurrence of the disease in epidemic form. Up till the end of the last century, however, any references to it as a disease occurring in epidemics were tentative and uncertain. A careful study of the affection as distinctly an affection of the anterior columns of the cord and on a large scale was not made until within the last five years. The large extent of the epidemics during that time and a careful compilation of the statistics have greatly modified our views, and virtually a new pathology needs to be written—not more, however, a new pathology than new records in reference to the pathological anatomy. Evidence that may now be considered conclusive has been advanced to show that the disease is due to some definite, specific virus, and is but mildly contagious. Wickman, in necropses made in cases of death during the Swedish epidemic, Landsteiner, working in Weichelbaum's laboratory in Vienna, and Flexner, of the Rockefeller Institute, New York, have, through their observations and experimental work, pushed the boundary lines of our knowledge far into territory before unexplored.

Careful studies of the blood and of the cerebro-spinal fluid fail to reveal the presence of any specific causative micro-organisms. When the staphylococci (albus and aureus) were found present they were not constant and were doubtless accidental infections. Whatever the virus may be it is filterable and ultra-microscopic.

From a fatal case in a child dying on the fourth day a portion of the emulsified spinal cord was injected into the peritoneal

cavity of monkeys, one of which died on the eighth day after inoculation; the second became paralyzed on the twelfth day and was killed on the nineteenth day. Two others did not develop symptoms of the disease. Examination of the first showed normal organs, but the spinal cord presented severe lesions. The pia was infiltrated with small, round, deeply staining cells, the infiltration extending chiefly along the median anterior fis-



Fig 1. Extreme Paralytic Flat-foot.

sure and less along the median posterior fissure into the cord, medulla and brain. Inflammation was most marked at the cervical enlargement. The diffused infiltration occurred chiefly in the anterior gray matter, and to a less extent in the posterior gray matter. The ganglion cells of the anterior horns, especially, showed severe degeneration. The anatomical findings in the second monkey were similar, but less intense, the lesion being most marked in the lumbar enlargement. Flexner has found that injections of the virus into the membrane of the nose, about the base of the skull, or beneath the dura mater, will more certainly produce the disease than injections into other parts, and

has also shown that the virus of epidemic poliomyelitis is eliminated by the naso-pharyngeal mucosa.

Another indication of its infectious origin is its frequent occurrence in connection with other infectious diseases or subsequent to them. Exposure to cold, or a sudden check of perspiration and trauma, have been assigned as causative factors. Seeing that vascular disturbances are at the basis of the affection in many cases, it is reasonable that trauma should sometimes be considered a causal factor. Possibly also a functional hyperemia, which is consequent upon increased activity in the lumbar region of the cord in infantile and child life, may give a reason why the lumbar enlargement of the cord is more frequently and more extensively invaded than other parts.

The external appearance of the spinal cord may appear unchanged, but upon section the anterior portion of the gray matter and frequently the central and posterior portions to a less extent are found softened and red, with here and there small hemorrhages and distended vessels. While these changes are sometimes limited to one anterior horn, in others they extend throughout the entire enlargement of the cord. In still others they are found in both enlargements, or even throughout the cord. These facts of pathological anatomy are in close accord with the clinical symptoms manifested. Microscopical examination shows clearly that the blood vessels are involved in the inflammatory process.

The changes in the motor neurons of the cord are equally characteristic. They show a great variety of degenerative changes. The earliest change in the cell is the cloudy appearance of its protoplasm. In the next stage of degeneration the protoplasm can no longer take a stain. In the third, the prolongations of the cells are entirely absent, and the state is one of shrinkage, the cell body being changed into a mass hardly larger than its original nucleus. During the first two stages here referred to, this process of inflammation in the cell may be arrested and repair be established, but cells which have lost their prolongations are permanently damaged and become atrophied.

The degree in which various groups of cells are affected varies greatly at different levels, or even at the same level, so that some

groups are destroyed and some only disabled, while others escape. Consequent upon these facts there is a gradual shrinking in the entire size of the anterior horn, of the nerve fibres which pass into the anterior lateral columns and of the anterior spinal nerves. As a consequence of the spinal lesion there is a degeneration and atrophy of the anterior nerve roots and of the motor fibres in the nerves of the body proceeding from the segment affected by the lesion. There is also a granular degeneration of the muscle fibres and finally a change of muscle into



Fig. 2. Right Foot Pronated and Left Foot Supinated; resulting from Infantile Paralysis.

fibrous bands, sometimes infiltrated with fat. Mention must also be made of the fact that atrophy of the bone is observed in the affected limb. There is an extension of the disease observed occasionally beyond the limits of the cord, on the one hand as a multiple neuritis and on the other as an inflammatory condition invading the brain.

Of seven hundred and thirty-four careful records, showing age at the time of infection, 78% were in the first, second or third year of life, and the remaining 22% varied in age from three to ten years. Sex does not appear to be a factor in causation; the season has a most important bearing, much the greater

number of cases occurring in the hot months from June to September. It appears to have a preference for water courses, following especially the smaller streams. In a few instances only has the disease seemed directly traceable to a foregoing case. In an epidemic occurring in Sweden, Wickham recorded one thousand cases, which he claims to have traced to one individual. The period of incubation would seem to vary from a few days to several weeks. Many instances have been reported where animals, including hens, dogs and horses have been affected at or about the same time as the children in the neighborhood, the most prominent symptom being leg weakness.

SYMPTOMS.

The most noteworthy symptoms are due to a change in disposition, restlessness and irritability before more pronounced symptoms appear. Instead of restlessness there may be apathy running into coma, in which case the onset of the paralysis will be less manifest. In a small proportion of cases there is no account given of prodromata. Not infrequently it is reported that the child went to bed well and could not stand next morning.

For a few hours or even days the extent of the paralysis increases, accompanied by tenderness, especially in the region of the affected muscles. Sometimes swelling of the joints is described. These conditions have occasionally caused a diagnosis of rheumatism to be made, and in three acute cases seen recently by the writer a diagnosis of hip disease has been made. The frequency of error in diagnosis recalls a remark made by Sir William Gowers, in December, 1909, to the effect that probably more mistakes were made in the diagnosis of this affection than in that of any other disease, due to the fact that the paralysis is so often preceded by symptoms that indicate a general malady, and this latter is first supposed to exist, and to it, when recognized, the paralysis is thought to be secondary.

The range of temperature is not typical, and is, therefore, not a trustworthy guide; it varies from 100° to 106° F., but is not often above 104°. The duration is usually from two to three days, but it occasionally lasts for seven days, and has been known to extend for a period of six weeks. In about one-quarter of the cases vomiting is present at the onset, and the nausea

sometimes continues for two or three days. There is usually no chill, but occasionally it has been noticed. Of the symptoms manifested, especially in the nervous system, restlessness is the most common; headache, convulsions, twitchings, apathy, stupor, coma, any or all may be seen. Rigidity of the head and neck and vertebra and head retraction probably indicate a meningeal



Fig. 3. Genu Retrorsum of Left Leg, due to Severe Disablement of the Hamstring Muscles.

type of the disease, and they occur at an early stage. Some of the cases closely resemble cerebro-spinal meningitis, and in at least one of the epidemics occurring in Canada, that in the valley of the Ottawa, 1905, a considerable proportion of the cases manifested these symptoms, and the epidemic was largely considered one of cerebro-spinal meningitis. Kernig's sign occasionally present has rendered the diagnosis somewhat more difficult. The sensorium, however, remains clear as a rule in poliomyelitis, and the elevation of temperature is not likely to last more than four or five days. Optic neuritis is seldom present, while it is common in cerebro-spinal meningitis.

Spinal puncture should be employed as an aid in diagnosis. In the incubation period and in the prodromal and acute stages, examination of the spinal fluid affords useful information. Before inoculation it is often impossible to get even one drop of spinal fluid from a lumbar puncture, but if found it affords few cells. During the incubation period there is a marked increase in the amount of fluid which can be obtained, and the cells are greatly increased in number, and are mainly of the large mononuclear type, with some polynuclears and lymphocytes. In the prodromal stage there is a still more marked increase, sometimes showing one thousand per cubic millimeter. The increase is still evident in the early acute stage, but now the lymphocytes are more in evidence. At the end of a week or ten days there are few cells to be found.

A study of the blood, taken in conjunction with the findings resulting from examination of the spinal fluid, affords ground for making an early diagnosis. The normal differential count is about: Polynuclears, 60%; large and small mononuclears, 25%; lymphocytes, 12%; eosinophiles, 3%. In the acute stage Lucas found the polynuclears, 40%; large mononuclears, 15%; lymphocytes, 40%; eosinophiles, 5%. At the same time there is a leucopenia which is fairly constant, corresponding with the acute stage and disappearing about the time when the hyperesthesia and other acute manifestations subside.

Nearly all of the cases complain of pain and tenderness during the first few days, most marked in the lower extremities, next in frequency in the spine and trunk, and comparatively seldom in the upper extremities.

There is always a loss of reflex action at the level of the lesion, the deep reflexes remaining absent for a long period, even when a partial recovery of the muscle takes place.

There is usually no disturbance of the bladder or rectum, though retention occurs rarely. There is no tendency to the formation of bed sores or to trophic skin changes.

Consequent upon the invasion of the cranial nuclei paralysis is manifested, though rarely, in strabismus, facial asymmetry and palsy of the tongue, larynx and pharynx. These are more common in the epidemic variety, and also, as one would expect, in cases where the arms are involved.



Fig. 4. Spinal Curvature, due to Paralysis of Trunk Muscles.



Fig. 5. Same as Fig. 4 less than a year later.

The delirium, convulsions or epileptiform attacks may continue for several days before paralysis is observed.

It is often difficult to determine to what extent pain is present, but it certainly is not uncommon in the neck, back and the joints of the extremities, which may be swollen and tender.

If along with some of the foregoing symptoms there should be trouble in the upper air passages, coryza, or bronchitis, sus-

picion should be aroused. Lucas reports that such affections of the air passages were general in the animals used for experimentation, and in a limited number of human cases which were observed. When death occurs it is generally due to paralysis of respiration. In a small percentage of cases paralysis was the first symptom noticed, there having been observed absolutely no evidence of illness preceding. One is disposed to conclude that the failure to note earlier symptoms was due to deficient observation.

TREATMENT.

So far as the paralysis *per se* is concerned there is not much that can be done to improve the condition of these patients; in the cases presenting the average or slighter disabilities the natural tendency is toward improvement—a lessening of the disability due *directly* to the paralysis. If these slighter cases were never seen by a physician and no definite line of treatment followed, the paralyzed muscles would greatly improve in efficiency. Such is the natural course followed in the majority of cases, illustrating the place and power of the *vis medicatrix naturæ*. In a small proportion of those affected, the destruction of motor cells in the cord has been so extensive and complete that there is no possibility of function being restored; and in nearly all cases in which paralysis, mild or severe, has appeared there will remain some degree of permanent disability. Emphasis should be laid on the natural history of the disease, as showing its inherent tendency to recovery; quite as much emphasis, however, should be laid upon another tendency which runs concurrent with that toward improvement in the paralysis, *per se*—the tendency to increasing deformity.

A strongly marked clinical characteristic of this disease is that the muscles surrounding and controlling any joint are not uniformly paralyzed. Some one or more groups will be found more disabled than their opponents corresponding exactly with the pathological findings in the cord; consequently, there is an unbalanced state of the joint, the forces pulling in one direction being constantly greater than those pulling in the opposite way. To illustrate, it is common in the foot to find the perinei pulling at the outer border more disabled than their opponents, the tibiales pulling upward at the inner border, while at the same

time the anterior tibial muscles raising the front part of the foot are more affected than the calf muscles which raise the heel; in consequence, the posterior and internal muscles will draw the foot into talipes equino-varus. This disparity of the joint-controlling muscle groups must necessarily in time produce deformity, although in the aggregate the muscle power is increased; so that while improvement in the degree of paralysis would point to increased efficiency, yet the greater deformity may cause a really increased and increasing disability. Thus, whatever disability is found to be present is due to two distinct causes, which must be kept separate in mind, however much they may run together



Fig. 6. A Boot Designed to Prevent the Foot From Rolling Over Toward the Outer Side.

in practice disabling the patient. The patient is quite sure to confound these conditions, but an intelligent analysis must keep them distinct, otherwise the indications for treatment cannot be well understood and appreciated.

Case 1.—Mrs. L., twenty-four, infantile paralysis in early life, right lower extremity was so completely disabled below the knee that there is a flail joint at the ankle. The tibiales muscles and the calf muscles of the left extremity have retained a preponderance of function, so that the foot is drawn into equino-varus. Now, despite the fact that the sum of muscular power of the left extremity is considerably greater than that of the

right, yet she has always found the left her poor leg, the determining factor being its greater deformity.

Dependent upon the time when called to see the patient the treatment may be wisely considered as that required: (1) in the acute stage; (2) in the period of resulting disability. Considered in relation to the means employed, a convenient and comprehensive scheme will be to describe the treatment (a) mechanical; (b) operative, or (c) developmental and educational.

ACUTE STAGE.

Little need be said regarding the treatment of the earliest symptoms. General indications should be followed. The bowels should be kept moderately relaxed, positions should be maintained which will serve to allay pain, the limbs may be surrounded by cotton batting, and such a course as would be followed in the general malaise which accompanies any of the acute fevers.

As in all other affections an early diagnosis is of first importance. If there be found any loss of power, such a posture in bed should be assumed as will tend to prevent congestion of that part of the cord related to the particular manifestation. The patient should not lie upon the back, or pillows should be so employed as to raise the suspected region of the spine, thus guarding against the hyperemia which gravity would tend to produce. Oppenheim was probably the first to recommend that a plaster jacket be applied so as to give complete physiological rest to the spine. Langé, of Munich, approves, saying that his experience confirms its usefulness. There should be no functional excitement of the parts involved. Complete rest is indicated. Medicinal treatment at first should be symptomatic; strychnine should not be given for the first two or three weeks, but Gowers recommends that it be given regularly after that time. Neither electricity nor massage should be employed till after the lapse of several weeks. Afterward rubbing, if employed, should not cause pain, and should in the main be upward so as to improve the circulation, relieving somewhat the coldness and edema of the extremities. Electricity may now be employed with some advantage, as it may assist in preserving the tone of the affected muscles until the natural stimulus of the

nerves is available through their improvement, if the related cells are not entirely destroyed. If there be no response, either to galvanism or faradism, it is a sign of grave structural degeneration, holding no promise of renewal.

When the storm has passed we should review the situation and take stock to ascertain, as far as we may, the damage done, so as to be prepared to assist in restoration of paralyzed muscles



Fig 7. A Knee Brace Intended to Keep a Disabled Knee in Place While Walking, and Having a Spring Lock Readily Adjusted so as to Permit Flexion When Sitting Down.

and in the prevention of deformity. It must be candidly admitted, however, that there is no means by which an accurate prognosis can be made determining in detail what muscles have a good chance to recover, and how extensive in each case the disability may prove to be. Not till several years have passed is there a certainty that a paralyzed muscle may not recover.

When paralysis has manifested itself the affected part should be maintained in a normal position; for example, if there is a

tendency toward toe-drop stretching the anterior tibial muscles, the foot should be so maintained by a light brace as to keep it at right angles, or even at an acute angle of 75°, thus preventing the stretching. It is found that when muscles that are disabled through paralysis are placed on the slack that the return to normal function is favored; hence, that is one of the most important features of early treatment, which has been definitely and finally settled. The principle is operative, even after the lapse of several years, and muscles that have been long disabled will take on a much improved action after having been kept for a considerable length of time without tension. The position favoring relaxation should be maintained till it is observed that improvement in power is not lost, but continues after giving up the protective means.

When the acute stage has passed, and before it would be wise to urge the patient to make vigorous efforts, light massage, electricity and baths may be employed to improve circulation, to stimulate nutrition and maintain a moderate degree of muscular activity; but, as function becomes more and more restored, the most efficient aid is self-activity within physiological limits. It is doubtful whether massage is of any considerable importance after the muscles have begun to resume their function. In the first days of the paralysis rest and a chosen position, which is not one of deformity, and which does not permit of overstretching of any of the disabled muscles, is the ideal treatment. When there is an indication of returning power the patient may be encouraged to exercise the muscles while recumbent, so that there shall be no risk of compelling him to bear his weight. It may well be that in allowing the patient to be upon his feet that muscles which show some degree of action in the recumbent position are compelled to be unduly stretched when standing. This is responsible for some of the inveterate cases of flat-foot, and also for the very disabling condition known as genu retrorsum, and also for some very severe cases of spinal curvature. It is a safe rule to anticipate and prevent deformity rather than allow the necessity for correcting it. If the hamstring muscles be much disabled, the knee may become hyperextended, even while lying in bed. This should be prevented by keeping a pad under the knee, maintaining a slight degree of

flexion. Abnormal flexion, however, at the knee is much more common than hyperextension, and if there is a tendency shown to maintain permanently a condition of flexion then a suitable brace should be employed, so that the limb may be kept extended, but



Fig. 8. Method of Education Employed When There is Severe or Complete Paraplegia. The Head Straps are Connected With a Wheel Above, Running on a Track.

not overextended during some part of every twenty-four hours. One should not urge a return to activity, nor even to the sitting position. The conditions present in this early state are such that improvement will be more satisfactory, more rapid and more complete through following out the rest plan of treatment, rather than inducing activity in order to secure development.

This latter will be required at a later time. I have occasionally seen very severe curvature of the spine which had resulted from urging the patient to sit up when the body muscles, either the abdominal or dorsal, were paretic.

Prevention of contracture deformity implies the necessity for orthopedic apparatus, but there is danger in its use; the surgeon should ever act on the conviction that in itself a brace or splint should be condemned, and that if it is to be employed the *onus probandi* rests on him. Light, well chosen, mechanical protection may wisely be employed, even while the patient is still confined to bed, especially to prevent toe-drop or hyperextension at the knee; they may also be required if in standing any group of muscles is put unduly upon the stretch. When the patient has to leave the bed and to resume the upright attitude, very careful observation should be made to ascertain what groups of muscles are much disabled, so as to be unfit to meet their responsibilities. It may be that the arch of the foot flattens down (Fig. 1); that the foot rolls over into pronation (Fig. 2); into supination (Fig. 2); that the knee is found to become hyperextended (Fig. 3); that the quadriceps femorus is unable to keep the leg extended and allows the knee to bend, throwing the person down, or that the spine cannot be held erect (Fig. 4).

Braces which encase and constrict any considerable portion of the limb are injurious in proportion to the amount and extent of constriction exercised.

Practically great and needless disability extending for many years may result from neglect of such simple precautions. An intelligent prevision at this time, and attention to some very manifest general indications, will bring gratifying results at a later time. A few months of neglect permitting the knee to be constantly flexed, the heel to be drawn upward, producing a condition of equinus, the foot to be abducted so as to roll over upon its outer side, or the foot to be abducted so as to produce a marked pronation or any other marked unbalanced condition, will soon become such a permanency as will demand active surgical intervention.

At this early stage mechanical means and educational work, instructing the patient how to use the extremity, are most effective for good. Not only the attendant, but the patient and



Fig. 9. Showing How a Boy Who Could Not Stand Up, Yet Could Move "On All-fours."

parents should understand clearly the fact that the disability comprises two factors, which should be kept separate in our thought. There is an element of paralysis, *per se*, and also the deformity which is likely to occur as a result of the paralysis. The former may not be a more disabling element than the latter. The former tends toward improvement; the latter to become worse with the lapse of time. The former is but little amenable to the physician's or surgeon's art; the latter it is the surgeon's privilege to relieve greatly or entirely. The writer is convinced that much more harm than good is done by trying to force functional activity.

Most of the patients whom it has been the writer's privilege to see have come for advice after deformity has taken place. A contractured condition of the muscles sometimes occurs very early. I have seen it manifesting itself in four weeks from the onset of the disease, and probably there is no feature of the treatment, the necessity for which is so little appreciated as the giving of rest and the prevention of deformity in the acute stage.

The wide extent of the paralysis at the commencement is no sure indication of the subsequent disablement. When all the limbs at first were involved I have known it clear up, so that only a few muscles remained paretic. The rule is an unvarying one, and is most important that the earlier the returning function in any muscle or group of muscles the better the prognosis. Also it will be observed that the earlier any limb or group of muscles is paralyzed or paretic in its relation to other parts the later will be its return to function and the less complete the degree of recovery. At the end of a week from the onset there is often seen some evidence of returning power; but two or three months may elapse before any restoration is manifest. Improvement may then be expected to continue for an indefinite time. Not till three months have passed is it safe, in many instances, to express an opinion as to what muscles are likely to recover.

TREATMENT OF THE RESULTING DISABILITIES AND DEFORMITIES.

This is a field of wide extent. It is fortunate, from the practical standpoint, that the lower extremity is more frequently affected than the upper. In order that the arm and hand may be efficient to serve nature's purposes, it must be possible to

accomplish fine manipulations. A needle must be handled, a stringed instrument must be fingered, a knot must be tied, etc. In the case of the lower extremity, the conditions are different. If it serves the purpose of bearing body weight and conveys the individual from place to place, its most important responsibilities are being met. Efficiency in the upper extremity implies power of delicate manipulation: in the lower it implies capability for affording a gross support. These facts have an important



Fig. 10. A strongly marked Case of Talipes Equino-cavus.

bearing upon treatment. While it is quite true that much may be done to improve the condition of the upper extremity, we are much more limited than in dealing with the lower.

The greater number of persons presenting themselves for treatment will have some disability of foot or leg, showing itself in the foot more commonly as equinus, or cavus, or varus, or valgus. These occur with nearly equal frequency. Not so often do we find calcaneus or calcaneo-cavus. If the function of the knee is disturbed it is commonly due to paralysis, or paresis of the quadriceps, with a consequent flexion deformity at the knee. The muscles about the hip are less frequently affected, but I have

seen them so completely paralyzed as to allow dislocation and replacement of the head of the femur to be effected at will.

The order of frequency of the disability in the upper extremity is the reverse of that of the lower. The order in the upper is shoulder, arm, lower arm and hand.

Deformity of the trunk may be considered as: (1) directly due to paralysis of the back or abdominal muscles, or (2) more commonly following indirectly from the paralysis because of resulting asymmetry of the lower extremities. This asymmetry is commonly shown either as a condition of flat foot or in the fact that one leg is shorter than the other, being affected by a more profound paralysis.

When it has become quite manifest what groups of muscles are paretic or wholly disabled and what muscles have retained normal or a fair degree of efficiency, operative measures of great interest and value and variously referred to as tendon transplantation, tendon grafting and muscle transposition may be employed. If the patient attempts to walk when the foot so rolls out of position, as to allow the outer border or dorsal surface to come into contact with the ground, the disability resulting is not alone due to the paralysis, but is chiefly the consequence of deformity; hence, if the foot can be restored to a normal position and so maintained that the patient shall walk evenly upon the plantar surface, great good will have been accomplished, although the sum of muscular power controlling the joint may not have been increased.

Every normal joint should maintain a condition of nicely adjusted balance. If, for example, the anterior tibial muscles be more disabled than the calf muscles, the latter will tend to produce a condition of toe-drop; if the muscles at the internal border of the foot remain stronger than their opponents, a condition of varus and supination will result. Thus the unbalanced joint is produced. In order to re-establish balance there are three methods which may be employed:

(A) NERVE ANASTOMOSIS.

In experiments upon animals there was promise of great usefulness in this means; but applied in the treatment of anterior poliomyelitis it is disappointing. The peripheral paralyses,

where degenerative reaction occurs and where the nerve-end apparatus suffers, by which the whole muscle suffers fatty degeneration, are not suitable for nerve transposition.

As muscle degeneration has occurred, it may not be restored by introducing a functioning nerve. On the other hand, if we resort to nerve anastomosis before degeneration has occurred and if later we find the muscle performing its function, there must remain a doubt whether it would not have regained its power without such an operation.

At present our conclusions on this subject can only be that of the Scotch verdict "not proven."



Fig. 11. Showing the Use of Wrench in Correcting Equino-cavus.

(B) ARTHRODESIS.

It may seem an unfortunate plan of procedure to do away with joint action, but especially in two joints of the foot this proves to be a very effective means of improving the patient's condition. If there be marked deformity at the mid-tarsal joint, either in the way of valgus, varus, or a strongly arched condition, such as we have in calcaneus, arthrodesis at that joint is the most satisfactory procedure. Similarly, in a case of flail ankle joint excision of the ankle, by which the articular surfaces of the tibia, fibula and astragalus are denuded and brought into inti-

mate apposition, proves highly satisfactory. In each case the joint surfaces should be sufficiently removed to bring bleeding bony surfaces into apposition, so that if possible a complete synostosis shall be secured. It does not follow, however, that if we fail in obtaining a bony union that fibrous union may not produce great benefit in the joints just referred to.

Arthrodesis may also be performed at the knee joint where the leg is greatly disabled. As it is highly convenient, however, that the limb should be flexed at times at that joint, the patient may fairly be given an opportunity of choosing a lock-knee brace instead of having an excision with ankylosis.

At the hip joint, in a few instances, where a dislocation and reduction readily takes place, there is no doubt of the advisability of securing ankylosis by means of excision of the joint surfaces.

An interesting condition is presented at the shoulder joint; not infrequently the muscles which control the humerus are so disabled that the humerus drops from its socket; while at the same time the groups of muscles controlling the scapula retain a moderate degree of power. In such a case a successful arthrodesis at the shoulder joint renders much benefit to the patient. Most of us have seen some patient who had an ankylosed shoulder joint, and who may have moved about amongst his fellows for years without the fact having been detected.

(c) TENDON TRANSPOSITION.

This is one of the most interesting operations which has, in late years, been added to the surgeon's armamentarium. Briefly speaking, it means that at any joint in the extremities where there is a lack of balance a normal adjustment may be secured or approached by transferring some of the stronger group of muscles to act in support of their fellows, which are natural opponents. In 1880 Nicoladoni for the first time published results in the performance of this operation. In 1892 the writer saw the operation performed by the late A. M. Phelps in New York, and has used it constantly from that time. Perhaps a definite illustration will add clearness to this proposition. For example, if the tibiales muscles are acting so as to draw the foot into a condition of varus, because of the greater disablement

of their opponents, the perinei, one of the tibiales, for example, the tibialis anticus may be cut from its insertion and may receive a periostial insertion at the outer border of the foot. This principle may be applied in an innumerable number of instances, such as increasing the power of the calf muscles in a condition of calcaneus; adding to the efficiency of the quadriceps femorus when there is a lack of power in extension at the knee; in transferring the pronator radii teres in the forearm so as to make it a supinator by passing its distal end between the ulna and radius and re-inserting the tendon.



Fig. 12. Showing "Cant-hook" Wrench Used for the Purpose of Correcting Supination.

An interesting addition to this work in recent years, which has been brought before the profession chiefly through the work of Langé, of Munich, is the introduction of a silk extension where the tendon of the transferred muscle is not long enough to reach the desired insertion. Certain precautions are necessary in order to secure satisfactory results. It is well known that silk ligatures which have been buried occasionally give trouble, even years afterward. To avoid this, Langé has the silk boiled in a sublimate solution an hour each day for two days, and then well dried under aseptic precautions. Immediately before using it is boiled in paraffine in a water bath; thus the paraffine makes

direct contact of the sublimate with the fluids of the tissues difficult. By this means of preparation Langé claims that the sublimate becoming thoroughly incorporated with the silk renders it antiseptic, while the coating of paraffine prevents it from being an irritant through giving out its sublimate unduly to the surrounding tissues. The silk thus introduced to add to the length of a tendon should consist of several strong strands, and may be of an indefinite length, even up to several inches.

It is found that a firm, thick connective tissue surrounds and penetrates the silk, forming really a new and efficient tendon.

In order to prevent adhesions the silk is carried as completely as possible through the sub-cutaneous fatty tissue. This may be done by passing from the point of entrance where the silk is quilted into the proximal portion of the functioning muscle to be transferred by a pair of long-bladed forceps to the point of exit, which is to be the point of insertion.

The opportunities for thus transferring the action of muscles so as to restore balance are almost innumerable. The principle is the same; details must be in accord with the requirements of each individual case.

Even if the muscle under consideration were not transferred to a new site so as to exert power where it is required, it would in many instances be beneficial to cut it away from the place where it had been acting and producing deformity, even though in so doing the sum of muscular power were made less. Such a course, however, is not necessary, as the tendons thus cut away should be transferred to a chosen point of bony insertion, where they may serve a useful purpose.

In most cases a period of three months should be allowed to pass before the limb is subject to any considerable strain. During this time the part should be placed in such a position as to allow comparative slackness, although at the time of insertion the muscle should be drawn fairly tight toward its point of new attachment.

MECHANICAL MEANS.

The range of mechanical treatment is so wide that only a few instances can be given by way of illustration. In former years the surgeon was compelled to depend largely upon mechanical aids to improve the condition of these patients. The simplest

and least objectionable for day use is a boot which can be so built as to roll the foot either toward supination or pronation as may be indicated. This may often accomplish the desired correction without in any way hampering what muscle power has been retained (Fig. 6).

At the ankle if the foot shows a strong tendency to adduction, throwing the ankle outward, a simple inner bar passing from the boot to a point below the knee where it is secured by a



Fig. 13. A Simple Night Brace to Prevent the Occurrence of Talipes Equinus While Lying in Bed.

comfortable band passing around the leg may be employed, such that a strap can pass around the ankle, drawing it inward toward the brace. In a moderate case a fair degree of comfort and efficiency may thus be maintained; or, if the foot shows a tendency toward pronation, an outer brace of a similar kind may be employed, using a strap to hold up the arch and draw the ankle toward the brace at the outer side of the leg.

When the extensor muscles of the thigh are so much disabled that the knee bends forward without control when attempting to

stand or walk, a retentive brace should be used, which will prevent the knee from giving way. For the adult it can be made with a self-locking joint at the knee, so as to keep the leg straight while walking, but such that it can readily flex at that point when it is desired to sit down (Fig. 7).

Occasionally it is a genu retrorsum which has resulted from a paretic condition of the hamstring muscles. In such a case the same brace should prevent hyperextension. A brace of comparatively limited extent may sometimes be attached to the boot, such that a strap can be drawn about the ankle to prevent the foot from rolling either inward or outward.

The cases must be exceedingly rare where it is wise to employ a brace to maintain the spine in an erect position. Objectionable as the appliance may be when used for one of the extremities, it is still more objectionable when it is necessary to strap it to the back, limiting the action of the thorax and all the body muscles.

PHYSICAL TRAINING.

Following muscle transposition, and in many instances where operative work has been done, great pains shoud be taken to re-educate the parts into the action which it is sought to obtain. In all paretic conditions, where tendon transposition has been done or the case has proven unsuitable for the employment of that means, physical training is the most important but greatly neglected means by which great and lasting improvement may be effected. It is one of the most efficient agents for restoring practical usefulness to the parts disabled. Voluntary movements are much more effective and educative than any form of passive treatment, such as massage, electricity, etc.

Every form of movement, if its range be within physiological limits, will serve to stimulate the growth of muscle, and, properly administered, will prove agreeable to the patient; but as soon as the power of voluntary action, however slight, has returned, then a new factor of tremendous possibility is rendered available. The former is but an outside influence acting upon the patient; the latter suggests self-help; the former leaves the patient dependent; the latter tends to make him his own master; the former deals only with the physical and material; the latter is educative and touches spirit and mentality.

If a movement in one limb has not yet returned, sometimes it may be coaxed by trying to have it done in company with a similar movement in the companion limb.

Under the guidance of a tactful instructor such educative work may be made to interest the patient greatly, and thus secure a helpful degree of co-operation, without which the work is apt to prove irksome and therefore non-effective.

If paralysis be complete, so that there is absolutely not a muscle movement to be observed, it is a difficult problem to



Fig. 14. Body Muscles Severely Disabled so as not to be Able to Stand Erect Unaided.

know how to commence treatment. Let the following case be an example:

S. C., at twelve years of age, a boy previously healthy, active and intelligent had a severe attack of anterior poliomyelitis. The body muscles were so extensively involved that his life was despaired of through apnoea. When the crisis had passed it

was found that both lower extremities and the upper arm and shoulder group of the right arm were completely paralyzed; that the lower arm group was greatly disabled, and that the left arm was but slightly affected. Two years afterward the boy could sit up only when supported by a chair, which protected him at both sides and at the back. The lower extremities could not be moved, and there was a very trifling amount of movement in the muscles of the lower arm of the right side. The left arm manifested almost a normal degree of power. This boy came for treatment five years afterward, at which time considerable deformities had occurred; flexion at the knees, some deformity of both feet, tilting of the pelvis and curvature of the spine. In a case of such extensive paralysis one might think that there was no reason why deformity should occur at the feet and knees. While lying in bed, however, the feet always took the position of equinus, this being accentuated to a considerable degree by the weight of the bed clothing; also while remaining in a sitting posture, as this boy had done for so much of the time during six or seven years, the knees also had come to assume a condition of permanent flexure, owing to contracture of the fascia and ligaments controlling the joints. Deformities of the feet and knees were readily corrected and tilting of the pelvis also, but the problem which presents itself in such a case is how to maintain the erect attitude so as to educate the individual into methods of walking. The ideal plan for providing this opportunity is to suspend the patient by straps passing under the chin and occiput, as support is given when applying a plaster jacket, the source of support above being a moveable car, or wheel that may travel over a space of fifteen or twenty feet on a horizontal track. Ropes can be passed parallel to this line of support, and the patient may, by the hands, pull himself along, using the power thus supplied to move the limbs, much as is done in the ordinary process of walking. This affords an opportunity to bring out and develop any possible remnant of nerve power or muscular activity which may be lying dormant.

It is seldom that any entire extremity is left absolutely paralyzed. There is generally a remnant which can be rescued from entire oblivion. By the process above described the circumstances are rendered favorable. It will be found that an intelli-

gent patient in this way will improve from day to day, until his methods of locomotion resembles, to a considerable extent, the natural movement of walking. At this time braces, reaching from the boots to the perineum, should be supplied, such that the weight can be borne without allowing the knees to give way. Daily training should then be continued as before. After practice in this way for some time the ropes referred to above may be laid aside and crutches supplied to the patient. These will now constitute the propelling power. After practice in this way for a sufficient length of time the supporting straps under the chin and occiput are removed, and reliance for support is solely upon the braces and crutches.

In such an extreme case as the one which is being here referred to, probably nothing beyond this point could, under any circumstances, be reached. The best standard that he can hope to attain will be the power of locomotion, thus aided by braces and crutches. In less extreme cases the patient may be educated into a fair degree of activity with less mechanical encumbrance. The standard set in this regard should be always that there shall be the least mechanical aid supplied with which the patient may perform the desired amount of work. It is a safe guiding rule to consider every brace, splint or crutch a bad thing, and to insist that its need in any particular instance must be demonstrated before the decision is reached to employ its aid.

SYNOPSIS.

(1) Infantile spinal paralysis is due to a specific infection, is communicable, but is only mildly contagious.

(2) It occurs sporadically or in epidemics; in epidemic form there are more adults affected than when it occurs sporadically, and the disease is more fatal.

(3) Three-fourths of all cases are under four years of age, and it is rare after ten years.

(4) The lesions are both interstitial and parenchymatous, of which the interstitial are of fundamental importance and the parenchymatous secondary.

(5) The ganglion cells are affected only when in contact with the interstitial process. The interstitial process is dependent upon the vessels for its character and localization; the lesion,

while more marked in the anterior horns, is not confined to them; the ganglion cells in the medulla, pons and basal ganglia escape serious involvement, even when near infiltrated zones.

(6) It has not been determined whether the disease is of hemogenous or of lymphogenous origin.

(7) While the central nervous system is the seat of the principal lesion, yet the condition of the internal organs points to a general infection. The edema found in the nerve tissue plays an important role in explaining the transitory nature of the symptoms in the non-fatal cases.

(8) The brain cortex may show evidences of vascular irritation and sometimes infiltration.

(9) Paralysis is a constant accompaniment—in fact is the chief clinical feature of the disease, and varies in extent from the slightest disability to a very extensive invasion.

(10) Invariably there is a tendency in the non-fatal cases toward improvement, or complete recovery from the paralysis *per se.*

(11) It is a general rule, important in prognosis, that the earlier a limb, relatively to other parts, is paralyzed the greater and more permanent will be its disability; and the earlier, relatively that there is some resumption of function, the more favorable will be the improvement.

(12) In the acute stage, rest and protection are indicated; thus deformity may be prevented and recovery from paralysis encouraged.

(13) Deformities at first preventible are often the chief cause of disablement in later life.

(14) The treatment after the acute stage has passed is chiefly surgical; even in the acute stage the protection afforded by mechanical appliances occupies the chief place.

(15) The chief surgical measures are mechanical protection, tenotomies, fasciotomies, tendon or muscle transference, arthrodesis.

(16) Mechanical aids should always be used sparingly, and educational and developmental means used largely.

(17) Disabled muscles should not be stretched; keeping them slack favors the return of function.

ACUTE POLIOMYELITIS *

By Clarence L. Starr, M.D.
Associate Professor of Clinical Surgery, University of Toronto.

NOMENCLATURE.

The term "infantile paralysis" is surely not an adequate or happy designation of this disease, which in epidemic form is making such ravages in our midst at the present time. That it is by no means confined to childhood is surely shown by the statistics of your committee and by those worked out in the study of other epidemics. A large percentage of adults is included in the cases reported in all epidemics. This fact, together with the greater virulence and hence the greater mortality of the epidemic form, makes us wonder, at least, if the sporadic cases we have seen at intervals are really the same disease, even though they leave the same train of symptoms. The sporadic type is rarely fatal and is usually confined to children. If the term "infantile paralysis" is used at all it should be modified by the addition of the word "spinal"—that is, infantile spinal paralysis—to distinguish it from those infantile paralyses which are of cerebral origin. Poliomyelitis as a designation has the advantage of being short, and while it is definitely known that the ganglion cells are not alone affected, it does not seem necessary to specify more accurately the pathological condition by calling the disease a poliencephalitis or a polio-myelo-encephalitis, as has been suggested. (The "anterior" may with wisdom be left off, as the disease certainly is not limited to the anterior cornua.) Acute poliomyelitis seems to be the designation most fitting the diseased condition.

Wickham in the study of the epidemic of Sweden suggests the division of the disease into types: first, spinal poliomyelitis; second, an ascending paralysis, Landry's paralysis; third, a bulbar type; fourth, a cerebral type; fifth, abortive types. A study of the New York epidemic of 1907, whilst showing some other types than the spinal poliomyelitis, does not seem to justify this division.

*Read before the Hamilton Medical Society, October, 1910.

ETIOLOGY.

For years it has been suspected that the cause of the disease, even in its sporadic form, is an infection possibly of intestinal origin, as so many of the cases seemed to be associated with gastro-intestinal disturbances. When the various epidemics occur, and a careful study of these is made, it seems more than ever probable that the "corpus delicti" is an infective organism. It is only within the past year, and that through the admirable work of Flexner and Lewis in the Rockefeller Research Laboratory, that we have been brought within hailing distance of the actual organism. Working with an emulsion of the spinal cord of a child who died of this disease the fourth day after its onset, Flexner succeeded in reproducing in the monkey similar lesions to those noted in the human being. This emulsion was brought into contact with the nervous system of the monkey by being inserted intercerebrally through a trephine opening. This shows conclusively that the disease is transmittable. An attempt was made next to determine what particular element of the cord was the real causal factor, and it was found that the cerebro-spinal fluid would occasionally produce these results, that not only an emulsion of the cord would carry the disease, but that a filtrate of the cord macerated in salt solution was equally efficacious. Subsequently it was found that the filtrate from the mucous membrane of the nose and naso-pharynx would also do as well. It was also found that it was not necessary that the injection should be made into the cerebral tissue, but if injected into the spinal canal within the membranes, or even into the peritoneal cavity, or sometimes under the skin, the symptoms could be produced and the pathological condition reproduced in the cord of the infected animal.

On account of the intimate relation, through the lymphatics of the nasal mucous membrane with the meninges by way of the cribriform plate of the ethmoid, this was suspected as an avenue of infection, and it was readily demonstrated that the meninges were easily infected in this way. This points to the possibility that the communicability of the disease may be through this channel, and should lead to careful disinfection of all secretions and watchful treatment of all cases of coryza during epidemics.

An attempt has been made to isolate the organism, but so far

it has eluded the search of the workers. No organism, protozoan or bacterial, could be found in a smear from the macerated cord of an infected animal or from the cerebro-spinal fluid, and all cultures on various media have been found sterile, although Flexner has been able to demonstrate the turbidity of the medium of filtered ascitic fluid, after incubation of a culture from the cord of a monkey.

It has been also demonstrated that a filtrate of the macerated cord through the finest filter, which is known to be bacteria proof, will produce the disease when injected into monkeys, equally with the emulsion of the cord itself. That this filtrate is not a toxic substance or toxin solely, but a living organism, is proved by the fact that the disease may be transmitted from that infected animal to a successive one apparently indefinitely. This behavior of the infective agent classes it among the filterable viruses, similar in character to that of rabies.

The relation of this form of virus to the living organism is conjectural, but it is probable that its activity is due to a definite organism so minute as not to be demonstrable by the microscope, and to pass readily through a bacteria-tight filter, such as the Berkenfeld filter.

PATHOLOGY.

The pathological lesions of this disease show themselves altogether in the nervous system, the spinal cord being the chief seat of change, with usually some pathological changes in the brain. The cerebro-spinal fluid is almost invariably found unchanged and rarely under any abnormal pressure. The meninges show redness or hyperemia, especially of the pia along the whole length of the cord, most marked at the cervical and lumbar enlargements. This corresponds intimately to the greater vascular supply of the cord, and is a probable explanation of the greater frequency of paralytic conditions in the limbs than in the trunk muscles, and the greater permanency of such paralyses.

A medium longitudinal section of the cord shows a distinct hyperemia of the gray matter, sometimes amounting to minute hemorrhages, with no very visible changes in the white matter. There is evident edema of the cord structures, with some moisture on the surface.

The microscopic appearance varies somewhat in the early and

late stages of the disease, giving us a reason for the slightly conflicting views as to the pathological histology of the condition.

MENINGES.

In the acute form the meninges, especially the pia, is densely infiltrated with round cells about the vessels, this infiltration being perivascular almost entirely, the lumen of the vessels being interfered with chiefly by the pressure from without. This pressure may be sufficient to partially or completely occlude the vessel, and in rare instances minute thrombotic changes in the interior of the vessel are noted. The invasion of the cord structures by the infiltration of round cells following the pial vessels is noted most markedly, at the anterior fissure and nerve roots. The meninges of the medulla and interpeduncular space, and even the base of the brain, are frequently equally infiltrated as those of the cord, thus giving rise to the meningeal symptoms sometimes seen in epidemic poliomyelitis, and so the disease may be mistaken for cerebro-spinal meningitis.

THE CORD.

The white matter of the cord is usually somewhat affected in the acute stage, most frequently in the proximity of the grey matter. These changes are of the same round-celled infiltration type, with possibly minute hemorrhages about the vessels. The white matter invasion seems to be a change only of the acute stage, all signs disappearing in the later stage of the disease. This also accounts for the occasional variation seen in the acute stage which simulates ascending, or Landry's paralysis. In some of the fatal cases bulbar symptoms are sometimes present.

The gray matter is invariably attacked, the anterior cornua more intensely than the posterior, but these together with the commissure also show distinct pathological changes. The blood and lymph vessels, as well as the nerve cells and ground mesh work, are all invaded. The vessels show the same perivascular and perilymphatic infiltration as in the membranes, which tends to separate the spaces and destroy the fibrillary mesh work. The nerve cells show hyaline degeneration and necrosis in places, with loss of their normal contour, and these are often surrounded by lymphocytes and polynuclear leucocytes. The richness of the arterial supply of the anterior horn as compared with the

posterior accounts for the greater degree of change in the anterior horn.

As Flexner has pointed out, there is good reason for believing that a fair amount of paralysis is the result of a temporary vascular obstruction. Particularly is this the case in those in which recovery is rapid. Thus some paralyses are apparently due to a shutting off of the blood supply from perivascular pressure, some to anemia from edema, some to mild degenerations of the ganglion cells, some to slight hemorrhage, and lastly some due to complete necrosis of the ganglion cells. Recovery takes place partly by resolution of the perivascular infiltration and re-establishment of the lumen of the vessel, partly by the absorption of the edema and hemorrhages, and partly from the regeneration of the partially degenerated cells. The cells which are completely necrosed will leave the permanent paralytic conditions which one sees usually remaining in most of the severe cases.

SYMPTOMS.

Nothing has been recently added to our knowledge of the symptoms beyond the fact that we now know that the infective organism may extend beyond the anterior cornua and that we may get in the early stages symptoms corresponding with a meningeal involvement, such as rigidity of the spine and Babinski's sign. We may also see cases which show distinct bulbar symptoms, and others of a polyneuritic type, but these added symptoms are transitory, and the cases often end fatally in a very short time.

PRODOMINAL SYMPTOMS.

The intestinal disturbances are frequently present and about equally divided between diarrhea and constipation. When we remember that this disease occurs in the summer time most frequently, when gastro-intestinal disorders are frequent anyway, it may be a mere coincidence. In the New York epidemic a large percentage of cases were preceded by a coryza or bronchitis or other evidence of respiratory disturbance, so much so that the evidence seemed to point to this as the portal of entrance of the infection. The most constant symptom at onset of the disease is the fever, varying from 101 to 104 degrees in nearly all cases. This is accompanied by sleepiness or dullness and apathy, some

complain of headache, vomiting, and a fairly large proportion of pain especially marked on movement of the extremity or trunk. The fever lasts from two to seven days, and the paralytic symptoms appear from 24 hours to several days after the onset. The onset of the paralysis is gradual in some cases, a weakness first appearing and subsequently a complete paralysis. In other cases the paralysis is complete when first noted.

The lower extremities are most frequently affected, the left slightly more frequently than the right, if statistics can be relied upon. The upper extremities are next in order, and the trunk, head and face rather infrequently. Control of the bowels and bladder is lost in some cases, and retention of urine is often a very early symptom which should receive careful attention. The atrophy which follows is rapid, and, while it was formerly considered to be trophic in origin, the great consensus of opinion at the present time is that it is due solely to disuse. Following the atrophy of muscles, the ligaments become also markedly atrophic, resulting frequently in dislocations of the joints, particularly of the shoulder and hip. These, of course, are among the preventable disabilities. Loss of deep reflexes of the affected musele groups is complete, the patella and plantar reflex in the lower extremities, and the triceps reflex in the upper extremity being absent when these extremities are involved. The superficial reflex as the cremasteric is usually retained. The paralysis is always of a flaccid type, and the circulation being poor to the extremity it is cold and blue in appearance.

A typical case presents symptoms of fever, often preceded by coryza, vomiting, dullness, with some pain on movement and rapidly following flaccid paralysis, with marked atrophy, loss of deep reflexes, and no sensory disturbances.

These paralyses are unfortunately too often succeeded by deformities, most of which are preventable, due to contraction of unopposed groups of muscle, dislocation of joints, with marked shortening of the entire extremity in severe cases.

TREATMENT.

In the earliest stage rest is essential, in fact, necessitated by the incapacity of the patient. The bowels should be swept out by a dose of calomel or castor oil, and a saline laxative continued

each morning to meet indications. The possibility of retention of urine should be always kept in mind, and where hot compresses over the bladder or a sitz bath or simple enema do not succeed in relieving the retention, catheterization should be resorted to every eight hours under the strictest aseptic precautions.

The pain and fever demand early attention. Quiet will usually relieve the first, and in those in which it does not aspirin, phenacetin or codeine may be given, the last sparingly on account of its tendency to increase the constipation. The fever may be relieved by a tepid sponge bath, followed by an alcohol rub. In severe headache, with definite meningeal symptoms, an ice coil continuously applied to the head gives relief.

In view of the well-known course of the disease in untreated cases it is dubious if any treatment of the local condition is of much value. On the other hand, if the arterial congestion and lymphstasis can be relieved in other locations, it would seem possible to limit the extension of the disease and to relieve the pressure from edema by brisk counter-irritation. This can best be accomplished in the early stage, when the child cannot be removed from the bed on account of pain, by a long mustard plaster extending from the nape of the neck to the natal cleft. As soon as the pain subsides so that the patient can be readily removed, a deep hot bath seems to be the most effective means of relieving congestion, of quieting pain and inducing sleep.

There has been a good deal of discussion as to whether the muscles which are paralyzed, and those partially affected, will recover most rapidly by rest, even to fixation of the parts by means of an apparatus, or by such activity as the patient is capable of. My experience has been that those cases progress most rapidly where as early as possible active movements are started. Here the bath is very helpful, as many active movements are possible with the floating assistance of the water, which could not be performed in bed against the friction resistance of the bed clothing, so in the very early stage the child in the bath should be encouraged to wriggle the toes, draw up the feet, flex and extend the legs and the thighs as if swimming, and make all possible active movements. This being repeated two or three times daily at first, and then as active movements become possible in bed the bath exercise is diminished in frequency.

There would seem to be a prospect that in the not distant future a method of modifying the severity of the disease may be discovered by means of serum therapy. It is surmised that one attack of the disease probably permanently renders immunity to the infected individual. At least, no cases are reported of a second attack in any individual so far as the writer can find. An investigation of the Rockefeller Institute also shows that so far it has not been possible to re-infect any of the monkeys which have survived one attack. This forces one to the conclusion that there is produced in the blood serum of the infected individual, a substance which tends to protect that individual from further attacks of the disease. Attempts have been made by means of such sera to lessen the severity of the disease in cases which are definitely infected. Other attempts have been made by vaccination, using the emulsion of the cord of an infected animal and injecting it under the skin in minute and gradually increasing doses. Thus after a monkey has been inoculated intra-cerebrally with the disease, 24 hours afterward, vaccination under the skin by minute doses of the same virus, seems to ameliorate the intensity of the disease, and thus the paralyses are lessened. In the human being, the inception of the infection not being definitely known, it is difficult, obviously, to introduce any immunizing substance, but it is hoped that in the epidemic form particularly, where observers are constantly on the alert to note the earliest symptoms, that even after the disease has commenced some serum or vaccine may be discovered which will be of value in checking the severity of this disease.

Shortly after the onset of the disease the tendency to deformity is present and requires the constant attention of the attendant to combat. All deformities of paralytics are preventable with extreme care. The deformities most frequently found and most disabling in character are those of the lower extremity. If one limb is flaccid and the patient cannot walk, the natural tendency is to place him in a chair as soon as he has recovered from the acute condition, and he often remains seated for long periods of each day. This attitude may extend over many weeks. The result is persistent contraction of the pelvic femoral muscles, psoas iliacus, rectus femoris and sartorious especially, giving a severe permanent contracture, causing a deformity very difficult

to overcome. By force of gravity the leg hangs over the edge of the chair, and the ham strings become shortened, by the same force the toes drop, Tendo Achillis becomes shortened and equinus results.

A little thought will serve to show how easily this deformity may be prevented. The child should not be left long in one position, particularly in a sitting posture on a chair. He should be put on the floor out of draughts, and allowed to sit with the knees straight, then to lie down on the back and to straighten out the thighs, next to roll on to the stomach, thus stretching all muscles at the hip. These movements should be started early, and in addition passive movements should be carried on daily. The feet should be dorsi flexed to the right angle or beyond, the knees extended to the full straight line, the popliteal space brought down to the floor while the back is still resting on the floor, and such other exercises as the individual case suggests should be worked out.

MASSAGE.

Massage should be commenced as early as possible, and it certainly is a therapeutic agent of great and demonstrable value. The massage may be commenced much earlier than is commonly done, for even in the stage of pain a gentle massage will often give relief, and so soon as it can be borne the massage should be vigorous and long continued. It stimulates the circulation and improves the nutrition of the muscles and other tissues of the extremity, and thus keeps up the muscle tone, prevents the extreme atrophy, and in the writer's opinion may be so given as to prevent the bone atrophy and consequent shortening of the limb, which so often occurs. The improvement shown is very slow, in fact is of a negative rather than of a positive character, and this is usually a source of great discouragement to the parents, and consequently massage is stopped just when it is most essential. It is difficult for the uninitiated to appreciate the fact that, even though no marked improvement is obtained, there is a great work being done in preventing disabling conditions and resultant deformities. The massage should be continued for a very much longer period than it is generally used, and would be best continued so long as the patient is growing. The greater, of course,

the loss of muscular power the greater will be the loss of movement, and consequently the greater the loss of nutrition and, therefore, the greater need of systematic and persistent massage.

The failure of nutrition in untreated cases is seen not only in the muscles and soft structures, but also shows itself in marked bony changes. The skiagraph of the two limbs on one plate will show the smaller diameter of the bones of the affected limb, and the measurements will show a shortening of from one to four inches in length in severe cases.

It has been the writer's privilege to see side by side with this diminishing size of bone and soft structure in the untreated cases, similar cases in which by persistent, systematic and faithful massage the atrophic changes have been prevented and the limb maintain the same length as its normal fellow.

What can be said of the much-vaunted treatment of this stage by electricity? It stimulates only the contraction of individual muscle fibres, and these only in case the nerve supply is not completely destroyed, and this in the very nature of it cannot be expected to yield much of value. It certainly is not in the same class with massage, and should not be indiscriminately prescribed, as it is at present. If a muscle or group of muscles respond, even slightly, to faradism, it may be wise for a time to stimulate these by electricity, but when a muscle has ceased to respond how can one expect to get any result whatsoever? Electricity is commonly advised by an attendant or consultant as a last resort, and it usually is a matter of indifference to him whether it is faradic, galvanic or static, and as the faradic battery is most portable it gets the preference and is generally used by the parents themselves. We come very close to the borderland of charlatanism in such practice, and if we are not to be classed with the osteopath and the Christian Scientist we must modify our methods in this regard.

The prevention of deformities beyond the simple procedures outlined above may be accomplished by operative or mechanical means. Mr. Robert Jones of Liverpool has devised an operation which is simple, fairly efficient and can be readily adapted to the prevention of almost any deformity in early childhood. It consists in the excision of an elliptical piece of skin with the subcutaneous tissue in such a way that when the edges are brought

together a restoration of the correct position of the deformed part results. In a straight toe drop the ellipse of the skin is taken out on the dorsum of the foot or in front of the ankle, and of such a width that when the edges are brought together the foot is held in a position of dorsal flexion slightly beyond the right angle. By varying the position and shape of the excised portion of skin it can be adapted to almost any deformity. If there is a tendency to valgus or varus, for instance, accompanying the toe drop, by shifting the excised ellipse inside or outside as required the combined deformity may be overcome. A light retention splint is applied until healing takes place, and after that the massage is continued, but the patient is not allowed to walk or to put any strain on the affected foot for some weeks. The shortening thus produced will, of course, gradually be lost by the stretching of the skin and scar tissue, and the deformity may show a tendency to recur, but it will take some months for this to happen, and in the meantime the muscular structures will have had time to recover their function, if such is likely to occur. This operation is particularly applicable to young children in the first year or two of life.

Various types of apparatus are in common use to prevent deformities, but one should always aim at the simplest form that will meet the requirements. A calcaneus deformity is the most difficult to splint. The Whitman calcaneus brace consists of a half sole plate with double upright extending as high as the tubercle of a tibia to a half band. It is without a joint at the ankle, and while it prevents the extreme flexion of the foot it is very uncomfortable and does not improve the gait.

The equinus or toe drop, is prevented by a double upright brace, which may be fastened to the heel of the boot, and reaches to the calf, where a band fastens it about the leg. There is a stop joint at the ankle which limits the plantar flexion at a right angle. At night a support is worn, consisting of a steel sole plate and a double upright extending upward to a similar calf band, but without any joint at the ankle.

In the varus deformity there is usually associated a toe drop, so that a similar splint to that for the equinus may be used with the addition of a thick felt pad over the external malleolus. A single outside bar attached to the boot and ex-

tending to a calf band with a good felt pad to be used as a fulcrum over the external malleolus is also efficient. In case this latter type of splint is used, a steel toe plate should be fastened to the sole of the boot, extending upwards at the ball of the great toe to prevent the upper of the boot being crowded off the sole. The valgus deformity, if mild in degree, may be corrected by means of a Whitman plate, or by an outside bar splint similar to that described above, with a T-strap attached to the inside of the boot, the horizontal arm of the T being buckled tightly around the ankle and the upright of the splint.

There are two objections to the application of any splint in the prevention of deformities, and they are both difficult to overcome. First, the constant wearing of the splint produces a still greater atrophy of the limb, especially where it is surrounded by the bands. This will be lessened, but not wholly prevented, by the careful application of massage several times daily. Secondly, the splints are constantly getting out of repair, and this is a very important feature in out-of-town cases. It is only by eternal vigilance that we can hope to keep them efficient. In young children, therefore, say under the age of two years, the excision of the skin and fascia, as recommended by Jones, offers the most satisfactory solution of the prevention of deformities. In older children some mechanical appliance, such as has been outlined, is almost absolutely necessary to hold the limb in a correct position, either until the function is restored and the tendency to deformity is lost, or until sufficient time has elapsed to convince one that there is no hope of restoration of function. After this some radical measures must be substituted.

It has been proven that if the paralyzed muscles from the beginning are relaxed, and never allowed to become overstretched, the possibility of restoration of function is much greater, and it will take place at a much earlier date than if such precaution is not taken. Therefore, one argues that if the paralyzed foot is at once put in such a position by means of operative or mechanical methods that the paralyzed group of muscles are prevented from being over-stretched at any time they will recover much more quickly than if they are not so protected. Again, it has been noted frequently by the writer that

in the relaxation of a group of muscles by tenotomy of an opposing contracted group, and the subsequent rest in this relaxed position, the function sometimes returns even after years of what was thought to be a permanent paralysis. What happens apparently in this case is that the regeneration of the nerve structure has taken place, but the muscle fibres have been so long overstretched that they lose their contractility, and it is only after a long period of relaxation that they regain it.

The types of deformities depend on the group or groups of muscles affected. The most common deformity is probably the toe drop, resulting from a paralysis of the extensors of the toes. This toe drop, while primarily due to the above paralysis, may be continued from the constant over stretching due to gravity and the contracted state of the unopposed calf muscles. Correction of the deformity is easily accomplished by a tenotomy of the Tendo Achillis and a retention splint of plaster of paris to keep the foot in this correct position until union of the tendon has occurred. Subsequently a lock joint splint to prevent recurrence of the deformity is necessary. This more frequently than in any other deformity results in restoration of the function of the extensor group, and the deformity is thus permanently cured. If no restoration takes place after a period of from nine months to a year, or when the patient has reached a suitable age, an arthrodesis or ankylosing of the ankle and astragalo-scaphoid joint should be considered in order to do away with the necessity of an appliance throughout life. One may hesitate to recommend the destruction of so important a joint as the ankle joint, but if the patient can only get about with the aid of a support which prevents the plantar flexion of the foot beyond the right angle, the function of the joint is gone, and hence it might just as well be permanently locked up. Following the work of Lange, of Munchen, Bradford and Soutter, of Boston have supplemented the arthrodesis of the ankle by the introduction of strands of silk to act as a guy or permanent support, and thus prevent the drop of the foot at the mid-torsal joint. It is almost impossible to transpose the attachment of any tendons to take the place of the paralyzed extensors, as the functions are so different, so an effort has been made to use strands of silk to support the anterior part of the foot. This has proven a very valuable assist-

ance in the writer's experience. Through an incision above the ankle down to the periosteum a double strand of heavy silk, No. 8 or 10 preferably twisted, is woven through a flap of the periosteum and carried downward underneath the anterior annular ligament to the desired point of insertion. In a straight equinus one strand is carried downward and outward and inserted into the periosteum of the cuboid, the other is carried downward and inward and similarly inserted into the scaphoid. The foot is then fixed in a plaster of paris dressing for from six to eight weeks, when an ordinary boot may be worn.

In the use of silk as a guy in these cases we have all found the constant tendency of the silk, sterilized in the ordinary manner by boiling, to work out after a certain length of time, say, from ten days to three or four weeks. Lange suggested the boiling of the silk in corrosive sublimate, claiming that this prevented this tendency, and the results of those of us who have so used it confirm this. The writer's cases of buried silks so prepared have done excellently. The silk, and especially the knots, should be carried as deeply under the skin as possible, and never put in directly sub-cutaneously. This introduction of silk is best done through several small incisions rather than through one extensive one.

The failures to get a fixed ankylosis, after arthrodesis of the ankle especially, are due most frequently to a lack of apposition of the denuded bone surfaces, so care should be taken to see that after the cartilage is completely removed from the astragalus and lower end of the tibia, that these mortise accurately into one another. More recent work tends to show that good results might be obtained in even young children if this detail were carefully attended to.

In cases of valgus deformity, the peronei are usually active as well as the extensors, the tibialis anticus and posticus being the only muscles at fault. This allows a marked flattening of the inside of the foot, and results in a very ungainly gait and a very weak weight bearing support. The attempted dorsal flexion results in the foot being abducted at the midtorsal joint, and ultimately a very lax condition of this joint. The mechanical treatment by the Whitman plate we considered in the prevention of this deformity, but it may be of interest to

some to know how the plate is made. A cast of the foot is made in as near the correct attitude as possible, and an outline similar to that seen in the illustration is drawn on the cast. A pattern is cut of paper to fit this, and then the pattern transferred to a sheet of phospho-bronze and the shape cut out. By heating slightly and pounding on a lead mass, it can be shaped to fit the cast quite readily. The phospho-bronze is used because it retains its shape better than brass or copper, and will not rust as does steel, even though it be plated.

In severe valgus of paralytic origin the plate will not hold the foot in a correct attitude, so an arthrodesis of the astragalo-scaphoid joint is made, and this is supplemented by transferring the attachment of the extensor longus hallucis to the periosteum of the scaphoid. The short extensor of the toe is adequate to prevent toe drop of the great toe, and no suture of the distal end of the long extensor need be done. If the extensor longus hallucis is paralyzed then a silk ligament may be attached. As in the former case, both ends of the silk should be attached to the flat side of the foot, over the scaphoid. It is best, also, to prevent possible recurrence of the deformity, to support these measures by the application of the Whitman plate as well.

The varus deformity is the least common, and when the patient arrives at a suitable age operative treatment gives very good results. An arthrodesis of astragalo-scaphoid and calcaneo-cuboid joints, taking out a wedge from one or both of these, if necessary, to completely correct the deformity, without division of the tibialis anticus, will usually give good results. If the two tibials are active, the tibialis anticus may be divided and its attachment transferred to the cuboid on the outer side of the foot to oppose the posterior tibial and thus give a stable foot. The tendon of the tibialis anticus will, in most instances, be too short to reach the cuboid, and this can be lengthened by continuing it with a strand of silk. If this tendon cannot be used, the silk strand alone from the tibia will give excellent support. The weight of the body tends to prevent recurrence of this deformity, if it is completely corrected, and no assistance of a mechanical kind is required after the retention plaster is removed.

The most disabling of all the deformities of the foot is the

calcaneus or calcaneo-valgus, on account of the loss of the lifting power of the calf muscles. The contraction of the extensor muscles draws up the anterior part of the foot, and the contraction of the plantar muscles tends to approximate the two ends of the foot, shortening it and producing a cavus deformity. The oscalcis, instead of having its long axis horizontal is depressed at its posterior end, the weight coming on the heel, and the anterior portion of the foot is simply a useless appendage barely touching the floor. For the correction of this, various operations have been tried. The shortening of the Tendo Achillis by the Y incision of Willett's, after division of the shortened plantar structures, only temporarily benefits the condition, for the scar soon stretches and the deformity recurs. Mechanical appliances are of little avail as the leverage is too short. The operation suggested by Whitman of the removal of the astragalus with displacement backward of the entire foot has given the best results in the hands of the writer. The operation is most satisfactory and worthy of a much more general use than is at present accorded it. After the application of an Esmarch's bandage, a crescentic incision is made from a point just above the tip of the external malleolus starting from the Tendo Achillis. It is carried forward just below the tip of the external malleolus and over the dorsum of the foot to the outer edge of the astragalus, care being taken not to go far enough to divide the extensor tendons. The peronei tendons are isolated and divided as far forward as possible. The fasciculi of the external lateral ligament are next divided and the joint exposed. By strongly adducting the foot the interosseous or calcaneo-astragaloid ligament, is exposed and divided, and then in turn the astragalo-navicular ligaments. Further adduction displaces the foot, and the astragalus is wrenched from its internal and posterior attachments. The internal ligament is separated from its attachment to the internal malleolus so as to allow the displacement of the entire foot backward. Next the articular cartilage is removed from the malleoli, and if the sustentaculum tali prevents the oscalcis from fitting up close to the internal malleolus it is divided, care being taken not to injure the plantar vessels and nerves just below it.

The foot should be displaced backward so far as to make the

heel very prominent. This carries the articulation of the tibia forward nearly to the anterior end of the oscalcis, thus carrying the centre of gravity more nearly to the centre of the foot and preventing the weight being transmitted to the heel only. It will be seen at this stage that the scaphoid bone comes directly in contact with the anterior surface of the tibia and thus serves an important function in preventing the continued dorsi flexion of the foot. The peronei tendons are now sutured into the Tendo Achillis with a moderate degree of tension to assist the support of the heel at its posterior extremity. The wound is then closed with some buried catgut sutures to bring the deep parts together, with superficial sutures of horse hair.

A copious dressing, preferably an antiseptic one, such as cyanide gauze, is applied and a firm plaster of paris bandage over it before the tourniquet is removed. There is usually comparatively little oozing of blood in the wound, and what there is does good rather than harm, by helping to form a firm fibrous ankylosis. The plaster should be left on from six to eight weeks and the foot protected for a short time afterward by elevating the heel of the boot about a half inch more than that on the opposite boot.

In the writer's opinion at least two or three years should elapse after the acute onset of the disease before one can say that there is no hope of restoration of muscular power, and at this time only after a fair trial of putting the paralyzed muscles in a relaxed position for several months. As arthrodesis has not given satisfaction in very young children, this operation for permanent correction of the deformity should be postponed until between eight to twelve or fifteen years of age. Whitman's operation for calcaneus deformity may be performed at a much earlier age, as one does not seek to get a complete ankylosis. In nearly all cases a fibrous ankylosis only is obtained with a greater or less degree of mobility, the point to be emphasized being, that if the leg is carried properly forward the weight will be so distributed as to make a recurrence of the deformity impossible.

In cases of permanent paralysis of the quadriceps extensor and consequent inability of the patient to prevent the knee from buckling forward, the sartorius has been detached from its

insertion and transplanted into the quadriceps just above the patella with the production of a serviceable limb. If the sartorius is not active, then we must resort to a support with an automatic lock joint at the knee. The question of arthrodesis of the knee must be one for the individual himself to decide, but the writer is of the opinion that a support which renders the knee stable, and at the same time allows of flexion when sitting down, is preferable to a permanently stiff knee.

Our attention has been altogether directed to the deformities and disabilities of the lower extremity. The treatment of defects in the upper extremity, on account of the intricate workings of the muscles, is much more difficult to attain. It is also much less necessary on account of the fact that one can do a large amount of work with one hand, but cannot get about with one lower limb.

224 Bloor St. West.

Canadian Journal of Medicine and Surgery

Editor:
J. J. Cassidy, M.D.
45 Bloor St. E., Toronto

Managing Editor:
W. A. Young, M.D., L.R.C.P., Lond.
145 College St., Toronto

Surgery:
F. N. G. Starr, M.B., Toronto, Associate Professor of Clinical Surgery, Toronto University; Senior Surgical Assistant, Toronto General Hospital; Surgeon, Hospital for Sick Children, Toronto; N. A. Powell, M.D., C.M., Professor of Medical Jurisprudence, Toronto University; Senior Assistant in charge, Emergency Department, Toronto General Hospital.

Clinical Surgery:
Alex. Primrose, M.B., C.M., Edinburgh University; Associate Professor of Clinical Surgery, Toronto University; Secretary Medical Faculty, Toronto University; Surgeon Toronto General Hospital; and Herbert A. Bruce, M.D., F.R.C.S., Eng., Surgeon, Toronto General Hospital.

Orthopædic Surgery:
B. E. McKenzie, B.A., M.D., Toronto; Surgeon to the Toronto Orthopedic Hospital; ex-President of the American Orthopedic Association; and H. P. H. Galloway, M.D., Winnipeg, Man., Member of the American Orthopedic Association.

Physiology:
A. B. Eadie, M.D., Toronto.

Medical Jurisprudence and Toxicology:
Arthur Jukes Johnson, M.B., M.R.C.S., Eng., Coroner for the City of Toronto; Surgeon Toronto Railway Co., Toronto; W. A. Young, M.D., L.R.C.P., Lond., President of the American Medical Editors' Association; Associate Coroner, City of Toronto.

Physiotherapy:
Chas. R. Dickson, M.D., C.M., Queen's University; M.D., University of the City of New York; Electrologist Toronto General Hospital, Hospital for Sick Children and St. Michael's Hospital.

Pharmacology and Therapeutics:
A. J. Harrington, M.D., M.R.C.S., Eng., Toronto.

Pediatrics:
Allen Baines, M.D., Toronto; Associate Professor Pediatrics, University of Toronto; Physician, Hospital for Sick Children; A. R. Gordon, M.D., Toronto; Senior Medical Assistant, Toronto General Hospital; Helen MacMurchy, M.D., Toronto, Editor, The Canadian Nurse.

Dermatology:
D. King Smith, M.B., Tor., Toronto; Demonstrator in Pathology, Toronto General Hospital.

Medicine:
J. J. Cassidy, M.D., Toronto, ex-Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; W. J. Wilson, M.D., Toronto, Physician, Toronto Western Hospital; and Dr. J. H. Elliott, ex-Medical Superintendent, Gravenhurst Sanatorium, Ont.; Associate Medicine and Clinical Medicine, University of Toronto; Senior Medical Assistant, St. Michael's Hospital.

Clinical Medicine:
Alexander McPhedran, M.D., Professor of Medicine and Clinical Medicine, Toronto University; Physician, Toronto General Hospital; Lewellys F. Barker, M.D., Professor of Medicine, Johns Hopkins University, Baltimore, Md. H. B. Anderson, M.D., Toronto; Associate Professor of Clinical Medicine, University of Toronto; Physician, St. Michael's Hospital.

Bacteriology:
J. G. Fitzgerald, M.D., Lecturer in Bacteriology, University of Toronto.

Mental and Nervous Diseases:
N. H. Beemer, M.D., Mimico Insane Asylum. Campbell Meyers, M.D., M.R.C.S., L.R.C.P. (London, Eng.), Private Hospital, Deer Park, Toronto.

Gynecology and Obstetrics:
Geo. T. McKeough, M.D., M.R.C.S., Eng., Chatham, Ont.; and C. F. Moore, M.D., Toronto.

Pathology:
W. H. Pepler, M.D., C.M., Surgeon Canadian Pacific R.R., Toronto; Junior Medical Assistant, St. Michael's Hospital; and J. J. MacKenzie, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology:
J. M. MacCallum, M.D., Toronto, Senior Assistant Eye Department, Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Nose, Throat and Ear:
Percy G. Goldsmith, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb; Senior Assistant Ear, Nose and Throat Department, Toronto General Hospital.

Address all Communications, Correspondence, Books, Matter regarding Advertising, and make all Cheques, Drafts and Post-Office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

Reprints supplied Authors at Cost.

Editorials

THE MEDICAL INSPECTION OF IMMIGRANTS TO CANADA

From a report of Dr. P. H. Bryce, chief medical officer under the Superintendent of Immigration, Ottawa, it appears that the increased growth of Canada in population may be partly gauged from the fact that Prince Rupert, a port on the shores of the Pacific Ocean, is now a station having an agent and a medical officer with the necessary facilities for inspecting immigrants. The amount of medical inspection done there must have been considerable, for Prince Rupert, which in June, 1909, had some 500 population, in March, 1910, had a population of 5,000. It may be noticed, incidentally, that the steamship companies trading from United States ports to Prince Rupert cause Prince Rupert passengers to be examined at such ports as Seattle, by medical officers, before selling them transportation, thereby lessening the cost of carrying back rejected passengers.

Similarly, and for a similar reason, medical officers at ports of embarkation in Europe examine immigrants who are about to sail to Halifax, St. John and Quebec. At present relatively few German immigrants come to Canada; but, instead, there are Russians, Poles, Roumanians and other peoples. As most of these immigrants purchase transportation

from German steamship lines, they travel from their homes to German ports, and undergo reiterated inspections and examinations there, before being allowed to depart to Canada. The work of inspection, however, is done in a very commendable way, and in an environment of a highly satisfactory character. At Hamburg, one of the principal ports in Germany, the residences for steerage passengers consist of a series of permanent separate buildings of one storey, with lavatory and sanitary conveniences, simply but adequately furnished, in which the various nationalities and classes of immigrants are carefully separated.

Superior buildings, where every reasonable comfort is provided, have been erected for second-class passengers at Hamburg. A daily inspection by medical men is made of every immigrant awaiting a ship, both as regards the general health and the condition of the eyes. Unvaccinated immigrants are vaccinated, so far as possible, while any cases of contagious disease are sent to the appropriate wards of an isolation hospital.

Less extensive, but well-managed, detention buildings are maintained at Liverpool, for the continental passengers awaiting transportation by British steamship lines. With regard to the facilities for the prevention and treatment of contagious diseases of the eye, daily examinations are made by physicians for the steamship lines at continental ports, and again, at British ports, as Liverpool, the

continental emigrants are examined in the quarters maintained by the steamship companies before going on board. At Glasgow, the examinations are most commonly made by the medical officer of the ship, at the same time as the Board of Trade physician examines at the gangway, while the emigrants are going on board.

In spite of these precautions against the exportation of disease, specimens of unsound humanity continue to arrive at Canadian ports, and to test, in no small degree, the "sizing up" acumen of the Canadian inspectors. It is acknowledged, however, in the report, that the number of immigrants deported for medical reasons in 1909-10 was only 212, as compared with 464, in the previous year. This decrease shows that the sifting process instituted by the European steamship lines is exact, and it may therefore be accepted as true, in the words of the report, that, "the class of immigrants now coming to Canada, so far as health goes, will compare favorably with any similar number of our population."

J. J. C.

SYPHILIS AS THE ETIOLOGICAL FACTOR IN GENERAL PARESIS

When lecturing on the factors that enter into the causation of insanity, at the Toronto Orthopedic Hospital, November 19th, 1910, Dr. Charles K. Clark, Superintendent of the Toronto Asylum for the In-

sane, stated that syphilis was the chief etiological factor of general paralysis of the insane. This latter disease was, however, not directly due to syphilis itself, being rather a diseased condition of the nervous system following and partly due to syphilis (parasyphilis).

For some years back, Dr. Clark has been engaged in compiling statistics of general paralysis of the insane, as observed in the asylums for the insane of Ontario. These statistics are becoming of increased value with the lapse of years, and it is thought, will go to prove the malign influence of syphilis in the causation of general paralysis of the insane in Ontario. At the Toronto Asylum for the Insane, the relation between syphilis and general paralysis of the insane has been regularly established in each case by an examination of the cerebro-spinal fluid of the patient. A test of the cerebro-spinal fluid, known as Noguchi's test, is made, and if a flocculent or granular precipitate is obtained on standing, due to the presence of a globulin, the disease in question is believed to be a parasyphilitic affection. Noguchi's test distinguishes general paralysis from other forms of insanity, not associated with meningo-encephalitis. A test devised by Dr. Ernest Jones consists in adding the cerebro-spinal fluid to a concentrated solution of ammonium sulphate. A positive reaction is designated by a white ring at the junction of the fluids. Should the Noguchi test or the Jones test prove positive, the Wassermann reaction is looked for, and, if

found, the existence of antecedent syphilis in the patient's history is looked on as reasonably certain. Since these methods have been applied to the elucidation of the etiology of general paresis at the Toronto Asylum, it has been found that 100 per cent. of the cases show evidence of antecedent syphilis.

J. J. C.

RELATION BETWEEN FUNCTIONAL AND ORGANIC NERVOUS DISEASES

THIS rather complex subject was treated by Dr. Ernest Jones in a lecture before the clinic at the Orthopedic Hospital, Bloor Street West, November 12th, 1910. We do not present here a synopsis of the lecture, but would mention that the main point made was: that one should never diagnose a neurosis merely on negative grounds, by the absence of signs of organic disease; the diagnosis should be based on recognizing the characteristic attributes of the various neurotic symptoms. These attributes are as clearly defined as in most organic diseases, and the knowledge of them is essential to accurate diagnosis. Amongst other examples, Dr. Jones referred to hysterical paralysis. The peculiar combination of excessive intensity and limited distribution, that so frequently marks this disorder, is never to be found in organic cerebral paralysis. The lecture was discussed by Dr. John Ferguson (chairman), Dr. B. E. McKenzie, and Dr. J. S.

Hart. Dr. Ferguson advised medical students, who formed a part of the audience, to begin the study of nervous diseases by obtaining a complete knowledge of the diseases of the cerebro-spinal axis. Dr. McKenzie held, that the proper way to diagnose a functional nervous disease was to first exclude diseases of the organic nervous system. Dr. Hart asked: why the element of sex predominated in functional nervous diseases? Replying to Dr. Ferguson, the lecturer agreed that students should be taught organic neurology first; but insisted on the importance of their also paying attention to the study of the neuroses. Some of the reasons for this opinion were: that neuroses are much more frequent than organic nervous diseases; that they are poorly treated of in most text-books; and that they present a promising field for therapeutic efforts. Students should learn to recognize these conditions in their early stages; for treatment of them in these stages is much more fruitful. In reply to Dr. McKenzie, Dr. Jones said that one should examine, not only for the diagnostic signs of organic nervous diseases, but also for the diagnostic signs of the neuroses; otherwise errors would inevitably be made. In reply to Dr. Hart's query, the lecturer said that the word sex had not been mentioned during the lecture. It was more important to determine *whether* sexual factors predominated in the neuroses than *why*.

J. J. C.

TO RESTRICT THE SALE OF COCAINE

A BILL has been introduced into the Canadian House of Commons by Mr. E. N. Lewis (West Huron), the first clause of which provides that the sale of any poison mentioned in Schedule "A" Ontario Pharmacy Act, except under a medical certificate, shall be made an indictable offence, punishable on summary conviction by fine or imprisonment. Particular attention is directed to cocaine.

A good many catarrh remedies formerly sold in the Canadian market consisted of mixtures of cocaine and indifferent substances, and these so-called remedies are largely responsible for the spread of the cocaine habit. This habit may also have been formed by men, who have taken to the use of cocaine, as a cure for morphine and alcohol craving. However formed, the cocaine habit becomes an obsession which ruins its unhappy victim. Some of the more prominent symptoms resulting from excessive doses of cocaine are: a tendency to coma or collapse; a feeble, thready pulse, often becoming very frequent; great emaciation, loss of appetite and impairment of the digestive powers; increased frequency and great depression of breathing.

As signs of degeneration arising from the cocaine habit Butler mentions in his Text-Book of Materia Medica, Therapeutics and Pharmacology, p. 240: "The enfeeblement of the intellectual faculties, the loss of memory or ability to co-ordinate or control ideas, a consciousness occasionally merged in

pronounced mania, possibly with homicidal inclination, and an intense selfishness of thought and purpose, in which apathy, neglect of domestic obligations, and complete debasement of the nobler qualities are developed." The objections usually advanced against the continued use of morphine apply equally to cocaine, and physicians (especially specialists) should be careful not to assist in laying the foundations of the cocaine habit.

Law, in the ordinary sense, represents the way in which things come about—the best way of doing things. Now, what is the best way of preventing the sale of cocaine? The Ontario Pharmacy Act makes it an offence for pharmacists to sell cocaine to customers, so that this drug cannot be bought, in the pure form, from pharmacists. Neither can it be got, at the present time, mixed with other indifferent substances, as when contained in patented anti-catarrhal remedies, the sale of which is forbidden by Canadian "patent medicine" law. The user of cocaine must, therefore, get it surreptitiously. We see in the *Montreal Daily Star* (November 26, 1910) that "It is difficult work to detect the vendors of cocaine. Most of them, knowing that plain clothes men are liable to search them at any time, carry the powders in secret pockets in their sleeves and in the lining of their coats. Frequently the drug fiends have only to whistle outside a certain house. An envelope is lowered by a string from a window, the man outside places a quarter in it; then the envelope is raised and lowered again with the package of cocaine in it."

Mr. Lewis' bill is a step in the right direction, not only as a means of providing a preventive measure against the unlawful use of cocaine, but also as a warning to the public against the peril of the cocaine habit. J. J. C.

THE MEDICAL COUNCIL ELECTIONS

The following are the members of the Ontario College of Physicians and Surgeons as returned at the recent elections:

*Dr. Cruickshanks	Windsor	1
*Dr. Welford	Woodstock	2
Dr. McArthur	London	3
*Dr. Emerson	Goderich	4
Dr. Vardon	Galt	5
*Dr. MacCallum	Thornbury	6
Dr. Griffiths	Hamilton	7
Dr. Merritt	St. Catharines	8
Dr. Gibson	Sault Ste. Marie	9
*Dr. Stewart	Fort William	10
Dr. King	Toronto (East)	11
Dr. Hart	Toronto (West)	12
Dr. Bascom	Uxbridge	13
*Dr. Young	Peterboro	14
Dr. McColl	Belleville	15
Dr. Spankie	Wolfe Island	16
Dr. Lane	Mallorytown	17
Dr. Klotz	Ottawa	18
Homeopaths.		
Dr. Hardy	Toronto	
Dr. Jarvis	London	
Dr. Wickens	Hamilton	
Dr. Adams	Toronto	
*Dr. Routledge	Lambeth	

The new members are indicated by the stars placed opposite their names.

The Physician's Library

Applied Anatomy. The Construction of the Human Body Considered in Relation to its Functions, Diseases and Injuries. By Gwilym G. Davis, Associate Professor of Applied Anatomy, University of Pennsylvania; M.D., Universities of Pennsylvania and Goettingen; Member of the Royal College of Physicians of England; Surgeon to the Episcopal, St. Joseph's and Orthopedic Hospitals; Orthopedic Surgeon to the Philadelphia General Hospital; Fellow of the American Surgical Association; Member of the Society of Clinical Surgery; Member of the Orthopedic Association; Fellow of the Philadelphia Academy of Surgery, the Philadelphia College of Physicians and the American Academy of Medicine, etc. With six hundred and thirty illustrations, mostly from original dissections and many in color by Erwin F. Faber. Philadelphia and London: The J. B. Lippincott Company.

A work of this kind, especially one coming from the pen of so eminent a teacher as Dr. G. G. Davis, who for years has been identified with the Anatomical Department of the University of Pennsylvania, is almost indispensable to the surgeon. We cannot do better than quote the opening sentence of the preface written by the author, in which he says: "It is not the object of this work to teach plain anatomical facts; it is aimed to show the relation of structure to function, whether it is normal function or function disturbed or impaired by disease." Surgery without a most minute knowledge of anatomy and the relationship which one structure bears to another, cannot exist. A book like the one now under review is not a work on anatomy proper, but on the other hand anatomy in its relation to surgery. It is a volume of over six hundred pages, and is divided into various sections dealing with the Scalp, Skull, Meninges, Brain, Face, Mouth and Throat, Neck, Thorax, Upper Extremities, the Arm, the Region of the Elbow, Forearm, the Region of the Wrist, the Hand, the abdomen, Pelvis, Back and Spine, the Lower Extremities, the Region of the Hip, Thigh, the Region of the Knee, the Leg, the Region of the Ankle, the Region of the Foot. The

book contains six hundred and thirty illustrations, quite a number being in color. We take pleasure in commending the book to our readers, it being a volume that will be found practically indispensable to those practising surgery.

Atlas of Pathological Anatomy (reproduced from recent specimens). From the State Hospitals, Hamburg. With Explanatory Text, Anatomical and Clinical. By (the late) Prof. Dr. Alfred Kast, Professor of Clinical Medicine in Breslau and formerly Director of the State Hospitals, Hamburg, and Prof. Dr. Eugen Fraenkel, Prosector at the General Hospital, Hamburg-Eppendorf, and Dr. Theodor Rumpel, Senior Physician the General Hospital, Hamburg-Eppendorf. With a preface to the English Edition by J. Lorrain Smith, M.D., Professor of Pathology, University of Manchester. Translation by Francis C. Purser, M.D., Assistant Physician Richmond, Whitworth and Hardwicke Hospitals, Dublin. Complete in twenty-six parts. Single parts, $1.25 net. Single plates, 40c. net. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden.

We had the pleasure the other day of receiving parts thirteen to twenty-six, inclusive, of this important pathological atlas. This completes the full set.

We feel that we are correct in stating that there has not been a more important work on pathology published in many years. As we took occasion to say in a previous issue, these tables "give to the physician and medical student for a reasonable price an atlas of carefully selected types of the most important pathologic-anatomical alterations, reproduced in a technically perfect and absolutely natural way."

The tables are issued in German, English, Russian and Italian text. Each part sells for the small price of $1.25. For delicate coloring and beautiful artist's work one has but to turn to figure 22 (part twenty-five). It illustrates in color an "Hour Glass Stomach." The unopen organ is seen divided into two unequal parts—the larger at the fundus, the smaller at the pyloric end—by a deep circular constriction situated rather toward the pylorus. Figures twenty-four and five illustrate in a beautiful manner "Intussusception." In this illustration a portion of the ileum is shown curved like a postilion's horn. It is opened up almost along its entire length, and in its interior is

seen a sausage shaped mass. The photographs above referred to are no exceptions to the general rule, each colored illustration being very little short of a picture. We would earnestly recommend this work, not only to medical practitioners and pathologists, but particularly to hospitals and the medical faculties of the different universities. W. A. Y.

Lippincott's New Medical Dictionary.—The readers of this JOURNAL are referred to page xxi of this issue, where they will see an important announcement on the part of the J. B. Lippincott Company of Philadelphia and Montreal. This well-known publishing house is anxious to bring under the notice of the Canadian medical profession their new Medical Dictionary, and the announcement is well worthy of perusal.

Some Posological Hints and Other Useful Information. Published by The Fellows Company of New York.

This booklet, covering twenty-five pages or so, has recently reached us from the publishers, The Fellows Company of New York. As the name would indicate, it contains quite a fund of information regarding the absorption and elimination of medicines, something regarding which many physicians do not possess as full a knowledge as they should. This is a booklet which should be kept within near reach of the busy practitioner, as it is thoroughly practical and should serve as a reminder in daily practice.

The Physician's Pocket Account Book. By J. J. TAYLOR, M.D. 212 pages. Leather. Price, $1.00 postpaid. J. J. Taylor, Publisher, 4105 Walnut Street, Philadelphia, Pa.

At this season of the year we know that medical practitioners will appreciate Dr. J. J. Taylor's Pocket Account Book. It is certainly one of the best that reaches our office, its special feature being a system of accounts whereby each transaction can be recorded in a moment's time in plain language, so that it is strictly legal as evidence in court without any personal explanation. Dr. Taylor's Account Book is so arranged that any patient's account can be ascertained on demand without any posting. For those who prefer to keep their accounts at the desk Dr. Taylor publishes a desk-sized book of four hundred pages, the price for this size being but $5 per copy. W. A. Y.

The Extra Pharmacopeia.—The 14th edition of this publication is now to hand, and is a decided improvement in form and matter to previous editions. The shape of the book has been altered, in place of the squat form of the previous editions, the volume is now presented with slightly larger pages, with the result that the book is easier to handle and the reader has a better oversight of the subject matter. The new edition contains close unto double the amount of information contained in the old. The added matter is absolutely new and the standing matter has been completely revised. A large number of new chemical and pharmaceutical preparations have been introduced, making the work of indispensable value as a reference to the busy practitioner.

Mr. W. Lloyd Wood, we understand, has just received a consignment and will be pleased to fill any orders sent to him. The book is supplied to physicians at $3.10 each, postpaid.

A PALATABLE VEHICLE *

As physicians are probably aware, there are few vehicles for the administration of many medicines quite as palatable as those that are alkaline. An ideal vehicle is Grape Juice, especially a Grape Juice as carefully prepared as Smith's Grape Juice, bottled at Winona, Ontario. It is an undoubted fact that Grape Juice is a most valuable aid to the physician not only in the warm weather, but throughout the entire year. Grape Juice is most refreshing, especially when served from the refrigerator, and is mildly stimulating in character. At this season of the year, when a great many people resort to the use of cod liver oil in the treatment of chest troubles, it should be remembered that olive oil *administered with Grape Juice* makes a very palatable and valuable therapeutic agent, in the proportion of two ounces of Grape Juice to one or two ounces of olive oil, taken immediately.

As a cooling drink in fever, owing to its slightly acid taste, Grape Juice is most beneficial. It is also a general tonic, materially aiding in the building up of the system during convalescence from typhoid fever, and, what is only too common at this season of the year, the severer forms of la grippe.

*Publishers' Department.

63.

The Canadian Journal of Medicine and Surgery

A Journal published monthly in the interests of Medicine and Surgery

Vol. XXIX TORONTO, FEBRUARY, 1911 No. 2

Original Contributions

CLINICAL POINTS RELATING TO BRIGHT'S DISEASE*

BY H. B. ANDERSON, M.D., L.R.C.P. (LOND.), M.R.C.S. (ENG.),
Associate Professor of Clinical Medicine, University of Toronto.

A comparison of recent literature with that of a quarter of a century ago impresses one with how comparatively little of clinical value has been added to our knowledge of Bright's disease within that period. No epoch-making discovery, such as has occurred in many other branches of internal medicine, has characterized the investigation of the conditions loosely designated by the term Bright's disease. For any drug to control so obvious a symptom as albuminuria we are as helpless as the physicians of the time of Bright himself. Notwithstanding this however, there are many points, individually of perhaps minor importance, wherein opinions have changed and practice improved and which in the aggregate are of sufficient practical value to merit our careful consideration. In the present state of our knowledge, if we are to hope for better results, it is from more careful attention to these minor details rather than from any radical change in methods that we are likely to succeed. For many years I have been deeply interested in these diseases, both from the laboratory, the clinical, and life insurance points

*Read before the Oxford County Medical Society, Ingersoll, February 25th, 1910.

of view, and it is in the hope that from this experience I may be able to contribute something of practical value that I venture to speak on a subject the importance of which is so frequently forced upon all of us in our routine work.

In dealing with cases of Bright's disease I am convinced that we have too often tried to make them fit into the common rigid text-book classifications, at best a sorry attempt to express in concise form the outstanding features of certain types of the disease, to which a large majority of cases met with very imperfectly conform. Having diagnosed the *type* of case, we have too frequently based our opinions on this type, or on certain isolated phenomena, such as the presence of albumin or casts, rather than upon a comprehensive consideration of each particular case in all its bearings. In disease of the kidneys as of other organs, the functional capacity of the organs is after all the best test of their efficiency. Moreover this and other associated conditions, such as the blood pressure, the state of the heart and vessels, anemia, etc., outweigh in importance the information to be derived from urinalyses or other considerations of the renal condition alone.

How often are we surprised in the autopsy room to find the kidney parenchyma almost entirely replaced by cystic formation, or a hydronephrosis, and though everything points to the condition being of long duration, yet the almost inappreciable amount of renal tissue remaining, has served to carry on the function of the organs. Such observations necessarily impress one with the fact that under certain circumstances, especially when of slow development, advanced destruction of renal tissue is not incompatible with life and comparative comfort. Here as in other organs, we have a reserve of capacity far in excess of ordinary requirements. In chronic interstitial nephritis also, it is not uncommon to find at autopsy advanced cirrhosis of the organs in patients who have lived comfortably to a good old age. In autopsies in patients beyond fifty years of age, dead of other diseases, we so frequently find kidneys with granular surfaces, adherent capsules and narrowed cortices, that a degree of renal cirrhosis may be looked upon as a normal condition incident to age, and thus of no more clinical importance than the gray hair,

the lessened elasticity of the skin, or the slight thickening of the arteries, so frequently found at this period. The kidneys, as the organs chiefly concerned in the elimination of nitrogenous waste, as well as bearing the brunt of excretion of the toxic products of disease, are especially exposed to injury; so we need not wonder that they are among the tissues to early show the wear and tear of time. In a given case therefore it is not enough to know that the organs are diseased, but we must especially seek to appreciate the cause of the trouble, the functional capacity, the nature and extent of the process and the associated general condition of the patient.

Nothing is more fallacious than to imagine that any laboratory examination by itself can furnish us with this information. Clinicians are often misled by attaching too much importance to such examinations alone. Neither the amount of urine, the quantity of albumin, the number or character of the casts, or the percentage of urea can be taken as a safe index to the patient's condition. It is well known, and I have had cases under my own observation, in which repeated analyses failed to discover anything of importance and yet autopsy revealed marked evidence of renal disease. This is especially true of renal cirrhosis.

I am far from being among those who would minimize the value of laboratory methods as they are of unquestionable value to us, not as absolute criteria but often contributing an important part to the whole clinical picture. Urinalysis, as with many other laboratory procedures, is misleading only to those who do not appreciate its limitations as well as its proper sphere of use. Clinicians are far too prone to accept the dictum of the laboratory as final. It is unfortunate that in modern medical teaching and practice the wide scope of the work and the necessary subdivision of labor has too widely separated laboratory and bedside work, and placed the former too much in the hands of those who have not the opportunity of checking their observations and conclusions by hard clinical experience. The chastening influence of the difficult problems of the wards would serve as the best antidote to the cocksureness and dogmatism at times evident in the "test tube" diagnostician.

Osler quotes with approval the warning adage applied to the

old "Pisse Prophets," "The urine is a harlot or a liar," to which many a physician who has been misled and layman who has been unnecessarily frightened by prognostications based solely on a trace of albumin or a few casts, will give a cordial assent.

One need scarcely refer to many avoidable errors which lessen the value or render urinalyses worthless or misleading. Among such may be mentioned neglect to examine a mixed specimen of the total per diem excretion; allowing a specimen to stand too long without the addition of a preservative, thus permitting the growth of bacteria, alkaline decomposition, solution of casts or other organic deposit, or in cold weather the precipitation of urates, which obscure the microscopic field; accidental contamination by vaginal or other discharges; or neglect to filter turbid urine in testing for albumin.

Just here may I be permitted to digress somewhat in order to call attention to some points wherein more care and discrimination are required in the application of laboratory examinations to the elucidation of clinical problems. Too much attention has been given to the mere recognition of urinary deposits, and not enough to the careful consideration of their clinical significance. While not in themselves of any special diagnostic significance, such conditions as oxaluria, lithuria, phosphaturia, indicanuria, etc., may suggest very valuable therapeutic indications, especially when considered, as they always should be, in connection with other clinical manifestations. These conditions warrant more careful consideration by the physician than is usually accorded them.

The urea test as an index to the functional capacity of the kidneys has especially fallen into disrepute and not without reason. As the renal epithelium exercises a selective action towards the different substances it excretes, because one of these may be normal in amount we are not warranted in concluding that all others are. For the same reason the methylene blue, iodide of potash, phloridzin and other tests of renal adequacy, from which at one time much was hoped, have not yielded practical results commensurate with the difficulties attending their application. The same may be said of cryoscopy of the blood and urine, although Koranjii claims, after five years' experience,

"that there is no other method which is capable of discovering such small degrees of renal insufficiency." He has used it especially in determining the condition of "the other kidney" in cases of *unilateral* disease, in which operative interference is being considered.

In doubtful cases of renal colic, the microscopic finding of a few red blood cells in the first specimen of urine voided after the attack is a simple procedure which is of much assistance in clinching the diagnosis. In a case recently under my observation, in which a prominent New York surgeon had diagnosed appendicitis, and for which the appendix was afterwards removed without relief, this simple method proved its value, as it has in many other cases which one might quote.

The common notion that the presence of casts in the urine, in association with pus and blood, indicates the kidney as the seat of the pathological process, while no doubt often true, must not be too generally accepted. I have recently had a patient with recurring attacks of pain simulating renal colic, in whose urine pus, blood and many hyaline and granular casts were repeatedly present. Ureteral catheterization and X-ray examination by Dr. S. Cummings located the calculus in *the lower end of the ureter.* I have found casts in a number of these cases of ureteral calculus, probably due to the attendant disturbance of renal circulation. As neither the site of the pain nor the presence of casts is a certain localizing sign, *and as many renal calculi are found to be in the ureter,* one must conclude that no operative interference is justifiable until the exact location of the calculus is demonstrated by ureteral catheterization and X-ray examination. The unerring precision of these measures, and meatoscopy, in skilled hands, in cases of renal tuberculosis, calculus and other unilateral diseases, not only in localizing the trouble but in furnishing information as to the condition of the other kidney and contiguous parts, constitutes one of the most marked advances in our ability to deal with these conditions.

The attempt to localize urinary conditions by the predominating type of epithelium found in the urinary deposit I have found absolutely unreliable, and have long since ceased to attach any importance to it.

Bacteriological examination of the urine is often of value,

and it is needless to refer to the necessity for extreme care in collecting the specimen and examining it when perfectly fresh. In the case of the tubercle bacillus, the difficulty in differentiating it by staining *alone,* suggests the advisability of animal inoculation in every case. The method is simple and certain, though some few weeks must elapse before arriving at a diagnosis.

The failure to find bacteria or pus at times in the urine owing to a complete blocking of the ureter on the affected side should be borne in mind and make one careful with regard to inferences from their absence. A marked diminution in the quantity of pus or its entire disappearance from this cause, is often synchronous with an aggravation of the general symptoms.

I have already referred incidentally to the significance of albumin and casts in the urine. The question is one of extreme importance to us as clinicians. Whether a physiological albuminuria can exist or not is still a debated question. Personally I believe that an amount of albumin recognizable by ordinary tests can never be considered a purely physiological condition. It would appear to indicate a degree of functional weakness of renal epithelium. At the same time there is abundance of reliable clinical evidence to prove that the condition is not infrequent in persons otherwise healthy and in whom it is not followed by any serious kidney disease. In this connection one may refer to the large number of cases observed by Grainger Stewart, Saundy, Senator, Von Noorden, Leube, Sterling and others, who found traces of albumin in the urine of apparently healthy individuals—both adults and children—the frequency varying from 4.2% to 44% of cases examined. It was usually only *intermittently* present, often following severe exertion, as in soldiers after a long march, after cold baths, convulsive attacks, or so-called orthostatic or postural albuminuria. It was unassociated with the presence of blood or casts or alterations in the heart, vessels or blood pressure. It would be extremely valuable had we statistics bearing on the subsequent history of a large number of these cases to show the percentage compared with a corresponding number of non-albuminous cases which later develop definite evidences of renal disease, but unfortunately no such information is available. In individual cases

there is no doubt that complete recovery is common. Insurance companies in general are very conservative with reference to these cases, either declining them outright or accepting them only at special rates. In view of the generally acknowledged benign character of these cases, it would appear that there is much room for more discrimination in dealing with them.

Another important class is furnished by persons who in the fifth or sixth decade, show a trace of albumin, and perhaps a few hyaline and granular casts in the urine. This is a frequent phenomenon, especially among successful business or financial men, of sedentary habits, who eat and often drink unwisely and exercise too little. The urine is often concentrated, hyperacid, and shows a copious deposit of urates or oxalates, and at the same time there is perhaps some arterial thickening, increase of blood pressure, and slight cardiac hypertrophy may also appear. It is to this class that Osler refers, in writing of the advantages of a trace of albumin and a few tube casts in the urine, serving as the red lights which point to danger ahead; to be averted however by timely application of the brakes in the way of a more rational method of life.

That these cases are comparatively frequent is shown by the experience of life insurance companies in dealing with large policies in men of advancing years. In every other respect they may appear to be excellent risks until the urinalysis proves a stumbling-block. Some years ago I tabulated the examination results in twenty-eight cases of this sort, as shown on following page.

The results obtained depend to a certain extent upon the test used, being much more frequent with the potassium ferrocyanide and acetic acid tests than with the cold nitric acid, the former being much the more delicate of the two. In ordinary routine work, however, I believe Heller's test, properly applied, is sufficient, and that the more delicate tests have the disadvantage of detecting traces of albumin so minute as to be clinically negligible. They are useful however for confirmatory purposes.

The question naturally arises as to what should be the proper course in these cases. That the condition is compatible with long life is amply proven by the subsequent history of many indi-

	Specific Gravity.	Reaction.	Albumin.	Casts.	Cylindroids.	Deposit.	Indican.	Phosphates.	Pus or Blood.
1	1021	Amphoteric..	Trace..	Few granular	None.....	Oxalates and amorphous phosphates	Excess...	Reduced	
2	1024	Acid.....	"	None	Few	None	" ...	¾ normal....	Few reds.....
3	1023	"	"			Uric Acid			
4	1020	"	"			"			Few reds.....
5	1034	"	"		Cylindroids..	Amphorous urates...	Excess...	⅝ normal....	None
6	1020	"	"		"	None	Normal..	⅝ normal....	"
7	1032	Very acid ..	"	None		Oxalates and urates	Excess...	Normal.....	"
8	1025	Amphoteric..	" ...		Cylindroids..	None	" ...		
9	1021	Acid.....	"		"	Oxalates	Normal..		
10	1020	"	"	Hyaline ...		Oxalates and uric acid	" ..	⅞ normal....	Red
11	1035	"	"	Granular....	Cylindroids..	Uric Acid	" ..	Normal.....	
12	1023	"	" ...		"	Oxalates.....	" ..	Reduced	
13	1022	"	"			Urates	Excess...		
14	1037	"	"		Cylindroids..	Uric acid.....	Normal..	Normal.....	
15	1024	Amphoteric..	" ..	Granular...	None	None	Excess...	¼ normal....	
16	1030	Acid.....	" ..	Hyaline ...	Cylindroids..	Uric acid	Normal..	Reduced	
17	1026	"	"		"	Oxalates.....	" ..	Normal	
18	1021	"	"		"	"	" ..	½ normal...	
19	1023	"	"		"	"	" ...	¼ normal....	
20	1029	"	"	Hyaline	"			¾ normal....	
21	1023	"	"	"		Oxalates and phosphates	Increase..		
22	1034	"	"	Granular....	None	Oxalates			
23	1022	"	"	" ...	"	"	Normal..	Normal.....	Reds and Whites
24	1024	"	"	Hyaline	Cylindroids..	"	Excess...	⅝ normal....	
25	1017	"	"	None	None	"	Normal..	Normal.....	
26	1026	"	None	"	Cylindroids..	"	" ..	"	
27	1034	"	Trace....	Few hyaline..	"	None	Excess...	⅝ normal....	Few reds.....
28	1022	"	" ...	None	None	"	" ..	Normal.....	None

vidual cases, especially when the discovery leads as it often does, to a readjustment of the patient's mode of life along better lines. My own feeling is that if all other features of the case, especially the condition of the heart, vessels and blood pressure, are satisfactory, and if the individual is one likely to observe due caution in the future, the mere presence of a trace of albumin or a few casts should not debar him from insurance. It is much to be desired, however, that the subsequent history of a large number of these cases be followed in order to furnish us with accurate data from which to calculate the expectancy of life, and thus the terms on which insurance may be granted.

The presence of a few hyaline or even granular casts in centrifuged urine is so common after fifty years of age that their presence, with or without a trace of albumin, need give rise to little apprehension if the other features of the case are satisfactory.

The presence of a few casts is much more frequently demonstrated since centrifuging of the urine has come into common use. Not to be misunderstood, I wish again to emphasize that each of these cases requires the most careful inquiry into the associated general condition. The existence of pre-senile sclerosis, (*or a degree beyond that normally incident to the patient's age*), high blood pressure, cardiac hypertrophy or other evidence of myocardial change, as evidenced by a lessening of the field of cardiac response, a relative loss of the muscular quality of the first sound of the heart, or accentuation of the aortic second sound, are factors of the greatest moment. The trace of albumin or the presence of a few casts, like the cardiac murmur, *may or may not have much significance,* which must be determined by our general investigation of the case.

Even in cases where the urinary signs are much more ominous, we need not take too serious a view of the prospect. Some ten years ago I made frequent examinations, extending over some years, of the urine of a prominent man in public life. The urine was clear, acid, specific gravity about 1010, amount increased, and it contained a marked trace of albumin, with many hyaline, granular and blood casts, red blood cells, epithelial debris, etc. The findings were typical of those I had been taught to look upon as indica-

tive of chronic interstitial nephritis with a slight acute exacerbation. Since then he has continued a most active life, is now about 65 years of age, and I see him frequently walking down to business looking as well as ever. He is only one of many whose continued good health, as one sees them going about, reminds one that the outlook in such cases is less serious than earlier experience had led one to believe.

Another case referred to me by Dr. Bingham when he gave up general practice about ten years ago, was that of a lady of 59, who had suffered from an attack of hemiplegia with aphasia. She had then had albuminuria for five or six years. The urine contained 7% bulk of albumin, with many casts, blood cells, etc. She also had mitral insufficiency and gallstones. The urinary condition was found at intervals for years, when I ceased to examine it. Last June she had a recurrence of the hemiplegia and on examining the urine I was surprised to find that albumin and casts were entirely absent. This patient died of pneumonia in December, the kidneys acting satisfactorily to the last.

Of all the phenomena associated with chronic Bright's disease, albuminuric retinitis has undoubtedly the most ominous prognostic significance, as these patients usually die within a year or two of its appearance. In the autumn of 1908, within a few days of each other, I was consulted by a prominent physician in Eastern Ontario, aged 44, and a journalist, aged 34. Both were men of good habits and family history; neither had suffered from any previous serious disease, and both had been actively engaged at their professional work up until this time. Inability to undergo active exertion, dyspnœa, headache, and failing vision were their most urgent symptoms. They both had a trace of albumin in the urine, increased quantity, low specific gravity, hyaline and granular casts, red blood cells, etc. The physician had marked arterial sclerosis, blood pressure 240 mm., and cardiac hypertrophy. The journalist's blood pressure was 170, and the sclerosis and cardiac changes less marked. Ophthalmoscopic examination in each case showed marked albuminuric retinitis. Both patients died within four months. The physician's case was a striking example of the truth of Von Noorden's statement, that most cases of Bright's disease die from *cardiac* rather than *renal* failure.

Retinal hemorrhages not infrequently occur in the course of chronic Bright's disease and may produce loss of vision, but the prognosis is very different from that of albuminuric retinitis. Thus a patient, a Hebrew aged 55, consulted me some eight years ago. A short time before he had suddenly lost his sight, first in one eye, and shortly afterwards in the other so that he was quite unable to read. His vessels and heart were in good condition, as was also his general health. The urine showed about 10% bulk of albumin, and contained abundance of casts. Three years before this time he had been rejected for life insurance on account of albuminuria. Dr. Reeve reported the presence of retinal hemorrhage and gave a bad prognosis as to his sight. He afterwards went to Vienna and consulted Fuchs, who confirmed the opinions we had given him. I examined him at intervals for some years but noted no material change in his urine or his general condition. On preparing this paper, I asked him for a sample of his urine, which was examined on February 14th, and showed as follows: Amber color, clear, acid, specific gravity 1025; no sugar, albumin or casts. His blood pressure is 115 mm., and his heart and arteries are in excellent condition. The improvement in this case is certainly beyond anything which I had anticipated and such occurrences suggest possibilities in prognosis not generally entertained. He has probably developed to a degree the secondary contracted form of kidney (small white), with the relatively favorable prognosis of interstitial nephritis.

Of all cases of Bright's disease, except those with albuminuric retinitis, the most hopeless are those insidiously developing with marked œdema, a high degree of anemia, a large quantity of albumin (10% or more by bulk), hyaline, granular, epithelial and fatty casts, heart weakness, etc. Clinically, they are described as subacute or subchronic parenchymatous nephritis, and pathologically as the large white kidney. I have never seen a case recover and as a rule these patients die in from six months to two years. The most favorable outcome we may ordinarily hope for is to tide these cases over into the secondary contracted, or small white kidney when they may live for a number of years. A case which came under my care a year ago illustrates so many clinical points that I shall describe it more in detail.

F. W., commercial traveller, aged 24, with good family and personal history. In December, 1908, while on a business trip in British Columbia, he noticed that he was increasing rapidly in weight, and that his feet and face were becoming puffy. After an unavoidable exposure to cold and wet in January, 1909, he became much worse. The urine was reduced to a few ounces and he developed the most marked degree of general anasarca. He was in the hospital in Vancouver for eight weeks, without any improvement, and his condition was despaired of. His father went out and brought him home. On his arrival in Toronto, on March 27th, 1909, he was placed under my care. The anasarca was general, the scrotum as large as a child's head, fluid in the peritoneal cavity, and œdema of the bases of the lungs. The urine was reduced to 8 ounces per diem; turned almost solid on boiling, and contained abundance of hyaline, granular, epithelial and blood casts, red blood cells, epithelial debris, etc. The patient was very anemic. The one favorable feature of his case was that the heart and vessels were in good condition. He was put to bed on a diet reduced for the first few days to 16 ounces of a milk and cream mixture, no other fluids being given. He was treated with vigorous saline purgation, daily packs, with hot water bottles to continue the sweating. Southey's tubes were introduced from place to place and large quantities of fluid thus drained away. Little was given in the way of diuretics, except occasionally pot. citras, which had little effect, and theocin, grs. 7½, for two or three doses, and repeated at intervals. The latter had a marked effect but this would pass off, and the patient complained of peculiar fainting sensations at times from its use. The urine began to increase in quantity up to 16 and 20 ounces *per diem*, careful daily measurements being made. The amount of milk and cream was gradually increased, cereals being added to the diet and the urinary excretion kept in excess of the fluid ingested. Remarkable fluctuations in the amount of urine occurred at times, quite apart from any alteration in the treatment. This general plan of treatment was persisted in for some months, with gradual improvement. In July he had a relapse during which the anasarca recurred. In my absence, Dr. Fotheringham was called to see him and considered his case as hopeless.

He began to improve again, however, slowly but surely. In September the œdema had all disappeared except from the legs, which had been bandaged with puttees. He began to go about, his condition gradually improving, his anemia and pasty appearance passing away and the urine increased to 60 ounces or more *per diem*. In September it still contained about 10 per cent. bulk of albumin, and there were many casts of all sorts. Since that time I have seen him at infrequent intervals, there being no recurrence of his general symptoms and the urine gradually improving. His blood pressure has remained below 120 throughout and there is no cardiac hypertrophy. A urinalysis on Feb. 14th showed as follows: Amount 60 ounces, amber color, no sediment, specific gravity 1010, acid; no sugar; albumin 1½%; urea, 10 grs.; a few hyaline and granular casts. In view of the great improvement which has taken place it is hard to say how much further it may proceed;* it appears to me now to be a case of secondary contracted kidney with possibilities of many years of life.

My own experience has led me to believe that where marked albuminuria persists for three or four months the chances of complete recovery are exceedingly slight, thus showing the necessity of the most careful and vigorous early treatment. In the albuminuria of pregnancy the prognosis is relatively much better.

I quote the above case because I believe it illustrates important points in treatment, not in this case alone but in a number of others in which I have tried it. I am convinced of the value of saving the kidneys by restricting the diet, and especially the amount of fluid, in acute cases with œdema, and as far as possible in subacute cases. In this way we not only spare the kidneys but the heart. As the case progresses a more liberal diet is allowed—cereals, certain vegetables, fruit juices, etc., being added—the fluids being kept down until free diuresis sets in. Free purgation and sweating are of great value, especially where the cardiac action is good. The use of Southey's tubes, or puncture, by assisting in the direct removal of fluid, I believe is extremely valuable, not only in removing a symptom but in

*The outcome in this case has been more favorable than one had dared to hope. In December, 1910, two years after the onset of the trouble, the patient had so fully recovered that no discoverable evidence of his illness exists, and Dr. T. F. McMahon recommended him for a 20-year endowment in a life insurance company.

relieving pressure upon the blood and lymph channels. The work of the heart is thus reduced, and consequently the general condition is improved.

On the principle of sparing the kidneys diuretics must be used with caution. I have seen remarkable temporary benefit result from the free diuresis produced by theocin but if persisted in this drug loses its effect and at length appears to exhaust the kidneys. I am now afraid to use it for more than a few doses, and then repeat it at longer intervals. It is of most value where there is coincident cardiac weakness.

The utility of a salt-free diet in cases of renal anasarca with chloride retention at times is evident, but on the other hand does not invariably produce good results. Normal saline injections with a view to flushing out the kidneys are often followed by an aggravation of the anasarca and other symptoms as one might expect.

In cases of chronic Bright's a more liberal diet to maintain the general nutrition, and especially the heart, is in order. Von Noorden has advised against the strict milk diet and the giving of too much water, and in my experience his plan of treatment marks the greatest recent advancement in the management of these cases. Suitable climatic treatment especially in early cases, where possible, is of great utility.

In cases of hemorrhagic nephritis the calcium salts are at times apparently useful. I would also direct attention to the necessity of avoiding severe exertion or jolting, exposure, etc., which is often followed by an immediate increase of symptoms in these cases. In avoiding the hemorrhage by rest and quiet, we help to remove the anemia, and thus *one cause of persistence of the hematuria.*

Cases of hemorrhagic nephritis, either beginning as such or being characterized by recurring hemorrhages during the course of an interstitial nephritis, are not at all uncommon. The following is an interesting example: L. R. D., *aet.* 17 years, student; family history good, except that his mother is very nervous. Had suffered from diphtheria in childhood, but otherwise, though never very robust, had had good health. In March, 1908, he had severe hemorrhage lasting some hours following tonsillotomy. A short time after he noticed the urine becoming darker in color; the quantity was not reduced. Next, more pro-

fuse hemorrhages began to occur, the urine at times being of a deep red color. He felt quite well; had had no swelling of the feet or face, etc. The condition would improve for a short time, but on any unusual exertion or excitement it would recur. He consulted me first on August 24th, 1909. Apart from a well-marked anemia (his hemoglobin being 75%), he appeared very well. Urinalysis showed as follows: Slightly smoky in color, quantity 60 ounces *per diem*, acid, sp. gr. 1010, a copious reddish sediment, albumin 9% bulk; no sugar, numerous hyaline, granular and blood casts; blood pressure 148; X-ray examination negative. The diet was regulated; the bowels kept active by mild salines; careful attention given to the clothing so as to prevent chilling of the surface of the body and resulting congestion of the viscera; calcium lactate to increase coagulability; nitrites to reduce blood pressure; iron for the anemia, etc. What to my mind was the most important point in treatment was the avoidance of exertion, jarring of the body, and other factors that tended mechanically to produce the hemorrhage. Whenever this appeared he was ordered to go to bed and keep quiet until the bleeding ceased. In this way the *anemia soon disappeared, and with it one of the causes of the continuance of the hemorrhage.* The patient improved continuously, and at an examination made a few days ago no blood was visible to gross examination, though the microscope shows a few red cells in the centrifuged deposit. No casts were found.

In the absence of specific medication, what I would urge is a more careful study of individual cases from every point of view —the etiological factors, environment, diet, associated conditions in other organs, the condition of the blood, etc.—and in this way glean therapeutic indications for the regulation of many details, the sum total of which is often capable of exercising a remarkably favorable influence on the renal condition and the general health of the patient.

184 Bloor St., E.

THE THERAPEUTIC EFFECT OF SUGGESTION *

BY ERNEST JONES, M.D., (LOND.), M.R.C.P. (LOND.).
Demonstrator of Medicine and of Psychiatry, University of Toronto.

The ultimate aim of all scientific therapeutics should be to establish the exact way in which any given form of treatment brings about its effect, and, with this knowledge as a basis, to define its scope and provide precise indications for its use. Close investigation of a therapeutic measure that has empirically been found to be effective frequently yields important information about the nature of the malady itself; suggestion constitutes no exception to this rule.

The study of this process is one of especial importance, for on the one hand suggestion has of late years been invoked to explain a great many phenomena in sociology and pathology as well as in therapeutics, and on the other hand it is, of all therapeutic agents, perhaps the most widely used, either consciously or unconsciously; in the case of the psycho-neuroses many writers sum up the discussion of treatment in the one word "suggestion." It is probable that the eager readiness of the medical profession to employ the term "suggestion" is due not so much to the propagandism of the Nancy school as to the comforting discovery that by it a great economy in thought could be effected. To be able to attribute a given occurrence to "suggestion" is with many a complete solution of the problem, and they do not find it necessary to pursue the matter further, or even to acquire any clear idea of what they actually mean by the term.

It is expedient to distinguish two different connotations of suggestion, one conceptual, the other affective. In the first place, the term is used to denote the effective conveyance to a person's mind of any idea, Bernheim's definition. This may conveniently be described as "verbal suggestion," though it need hardly be said that the process may be brought about quite apart from the use of actual words. In the second place, the term denotes the

*Read before the first annual meeting of the American Psychopathological Society, Washington, May 2, 1910. A considerably extended form of this paper appears in the Journal of Abnormal Psychology, Oct., 1910.

acquirement by a person of a given affective state, such as when one person responds to the "personal influence" of another. The difference between the two connotations may be illustrated by referring to a criticism that several writers, with no knowledge of the subject, have made concerning the successful results of psycho-analytic treatment, namely, that "the cures are due to suggestion." Here two different criticisms are evidently confounded. It is at one time meant that the memories evoked during psycho-analysis are false, having been merely suggested to the patient, and at another that, whether the recovered memories are true or false, the improvement in the patient's condition is brought about through the personal influence of the physician. It is generally recognized that the second of the two processes here distinguished, which may be called "affective suggestion," is the more fundamental, and is the necessary basis for the first one. The condition of suggestibility, or increased readiness to accept verbal suggestion, is thus the secondary consequence of an induced affective state, and it is with the latter that we shall here be chiefly concerned.

The most perfect form of suggestive influence is that seen during hypnosis, and, as the Nancy dictum is generally accepted that suggestion and hypnotism are merely stages of essentially the same process, the two may be considered together. One of the most definite advances of recent years in our knowledge of this subject has been the gradual recognition of the fact that the chief work is performed not, as used to be thought, by the operator, but by the subject. The striking incongruity between the cause and the result should in itself make us strongly suspect this; the remarkable manifestations of hypnosis surely must depend on some more powerful forces than the external "suggestion" given by a shining light or a bare word. The occurrence of auto-hypnosis and of spontaneous ecstasy, and the extraordinary variation of hypnotic manifestations in different persons, greatly strengthen this suspicion that we have to do rather with some inherent faculty that varies with different subjects than with any positive action or influence on the part of the hypnotist. We can no longer regard the subject as a helpless automaton in the hands of a strong-willed operator. It is nearer the truth to regard the operator as allowing himself to

play a part, and by no means an indispensable one, in a drama constructed and acted in the depths of the subject's mind. It is the forces at work in this drama that it becomes necessary to investigate; they are the real agents in suggestion and hypnotism.

Certain clinical considerations make this deduction practically inevitable. The psychologically essential characteristic of these processes has been described, by Bernheim, Sidis and others, as a dissociation of consciousness, an evidently just designation. It has, however, too hastily been assumed that this dissociation is an artificial state brought about by the hypnotic procedure, for the truth is that both in the normal and abnormal mind dissociation is already present, and is merely made use of by the operator. There is in general a fairly close correspondence between the nature and extent of dissociation and susceptibility to suggestion, so that it becomes advisable to investigate the most pronounced manifestations of these, namely, hypnosis in cases of hysteria. It is notoriously easier to study psychical processes under the microscope of "disease."

The resemblance of hypnotic manifestations to the characteristic symptoms of hysteria is in general so striking that in the eighties Charcot pronounced hypnosis to be a typical hysterical syndrome. I have long thought that there is in this view more truth than is now commonly believed, and that the triumph of the opposing conception held by the Nancy school is destined to pass away. It is certainly striking that the operator cannot elicit a single manifestation in hypnosis that may not be spontaneously produced by the disease, thus giving the impression that the manifestations merely result from the evocation of hysterical symptoms; the tremors, paralyses, spasms, amnesias, hallucinations, paræsthesias, tranee-states, attitudes, and ecstasies are typical instances of this. These symptoms have been observed all over the world both before and after Charcot's time, and the notorious Salpétrière *dressage* accounts for only some of the less important traits. The two most characteristic phenomena in hypnotism, the peculiar *rapport* between the operator and subject, and the curious post-hypnotic suggestion, have been shown, by Janet and Ferenczi respectively, to have their precise counterparts in hysteria.

The main reason why in late years the problems of hypnot-

ism and hysteria have been kept apart is that the great frequency with which hypnosis can be induced in the normal has seemed to prove the mutual independence of the two conditions. In the light of more recent knowledge, however, this very observation is a strong argument in favour of Charcot's view that the two are closely connected, for while on the one hand Sidis' conclusion, that "everyone of us is more or less suggestible" has been amply confirmed by later investigations, on the other, it is now recognized that Moebius' dictum "*Jedermann ist ein bisschen hysterisch*" is not an empty satire, but a literal fact. As Jung puts it, we have all had to fight with the same complexes that cause the sufferings of hysterics, and scarcely anyone gets off scot free from the "abnormal" effects of them. Freud has produced abundant evidence to show that the same unconscious, dissociated trends operative in hysteria come to expression in the normal by means of mechanisms psychologically closely akin to those that generate hysterical symptoms.

When studied from this point of view it is found that suggestion, so far from being an isolated phenomenon not further reducible by analysis, as is commonly believed, is only one specialised variety of more general psychological mechanisms that play a central and predominating part in psycho-neurotic disturbances. Put cursorily, the view here maintained is that suggestion is one manifestation of a more general mechanism called "transference"; that this in its turn is a particular variety of what Ferenczi has recently termed "introjection," and that this, finally, is a characteristic type of the "affective displacement," the excessive activity of which is so typical of the psycho-neuroses. These processes are most conveniently expounded in the reverse order, namely, from the general to the particular.

By "displacement" is meant the transposition of an affect from one conception, which is invested with an unpleasant feeling-tone, to another less inacceptable one. The "repressed complex" is replaced in consciousness by a secondary idea invested with the original affect of the complex; the association between the two ideas is usually of a very superficial order. The mechanism is common enough in everyday life, a banal instance being the child's doll which claims the preoccupation and care

appropriate to a baby—the idea of the former replacing that of the latter,—but in the psycho-neuroses its field of action is extraordinarily wide. The following is a simple instance: A patient was obsessed by the thought that he was sinning against God by playing the church organ, and as he was a professional organist he had to give up his career; the symptom had arisen from the remorse he felt at playing with another organ, his own. What is called the "inadequate emotional reaction" of such patients, the excessive sympathy, love or hate that they display on apparently trivial occasions, is to be similarly explained. The external occurrence has aroused by association the dormant memory of some previously experienced similar occurrence, and their abnormally intense reaction is due partly to the present occurrence and partly to the past one; strictly speaking, they are responding to both. Hence the "exaggerated emotions" of hysterics are only apparently exaggerated; they are only so in relation to the exciting cause; when correlated with the unconscious source they are found to be quite logical and fully justified. This excessive tendency on the part of the patient to incorporate his environment into his own personality, to "take things personally," and thus to widen his ego, is termed "introjection." It is merely an exaggeration of tendencies present in us all, common instances being the way in which a careful housewife is *personally* offended at any reflection on the cleanliness of her house, which in a sense is a part of herself; or the glow of *personal* pride we feel whenever anything enhances the renown of our particular city or country. When this tendency is carried to excess it obviously increases the sensitiveness of the person in question; every new section of environment that is incorporated into his ego adds a fresh group of possibilities for pleasant or unpleasant emotions; it becomes, as it were, a sentient antenna. As is well known, the sensitiveness of nervous invalids may at times be quite appalling; every trivial happening affects them in a personal way, and the slightest occurrence may bring about such an exacerbation of suffering that life seems impossible for them unless they are shielded to an artificially elaborate extent.

The most interesting introjective manifestations are those relating to the persons in the patient's environment. He trans-

fers on to them various affects—love, hate, and so on—that arose, perhaps years before, in connection with quite other people, just as a child who has once been hurt by a doctor is for some time afterwards fearful of every doctor he encounters. In order for this to happen there has only to be instituted the slightest resemblance between the original person and the present one. Such a patient having once intensely hated someone with a given characteristic, say red hair, will be ready to hate anyone he may afterwards meet who has the same characteristic. This tendency to live over again the same emotion in the presence of a person resembling one formerly associated with the emotion is called "transference," but Freud finds it convenient to restrict the term to the occasions on which the process happens in relation to the physician who is treating the case. Every physician who has had much experience with psycho-neurotic patients knows how variable, unreliable, and changeable is their attitude towards him; in fact, their "capriciousness" is generally notorious. On a slight change in his manner, or even apparently quite spontaneously, their attitude alters, trust is replaced by suspicion, gratitude by resentment, and so on, the extent of the alteration being out of all proportion to the exciting cause; for this reason they are to most physicians the most ungrateful, unsatisfactory and disliked of patients. This puzzling behaviour, however, becomes at once comprehensible as soon as one realizes that it is determined, not by the external occasion, to which it is so inadequate and abnormal a response, but by previously existing and usually unconscious emotions, which the external occasion merely evokes. It is altogether a question of association; a word or tone used by the physician unconsciously reminds them of some forgotten experience, and really it is to this that they are reacting; the response is determined, not by the conscious personality, but by some unconscious complex that has been stimulated.

A matter of peculiar significance is the observation that most frequently the affect transferred to the physician arose originally in connection with one of the parents, more usually the father. The respect due to the physician, and his position of prestige and authority, in themselves make readily possible the formation of an association between him and the parent, and often the mere enforcing of a piece of medical advice, a slight sternness or even

increase of firmness in tone, the reproving of an omission or fault, are quite sufficient to consummate this. The "firmness" with which it is fashionable to treat such patients, a term that frequently covers a considerable measure of hostility and lack of understanding on the part of the physician, obviously conduces in a high degree to the transference of the affect of parental complexes; the result of such an attitude is sometimes beneficial, frequently disastrous, and always unpredictable. As in most cases the incestuous relation of the patient to his parents, particularly to his father, lies at the very centre of his malady; it will be seen that the type of transference here indicated is of especial importance.

The affective processes that are in this way transferred by the patients to surrounding persons, and to the physician, at first sight appear to be of all kinds—gratitude, hate, affection, fear, jealousy, and so on—but psycho-analytic research has established beyond all possibility of doubt that these diverse processes are not, as they seem to be, primary and incapable of further analysis; on the contrary, they prove on examination to be only secondary reactions to deeper trends. It was one of Freud's most important discoveries that these deeper and more ultimate trends are invariably components or derivatives of the psycho-sexual group of activities. That resentment, anger, jealousy, and other sentiments and emotions may be secondary reactions to unsatisfactory sexual experiences, to despised or ungratified love, is of course a truism, one that is well expressed in Congreve's familiar lines:

> Heaven hath no rage like love to hatred turned,
> Nor hell a fury like a woman scorned.

In hysteria, the psycho-neurosis that most concerns us here, the symptoms are disguised expressions of various sexual desires. The symptoms that provide only a partial and unsatisfactory outlet for the pent-up affect are the recent, temporary, or changing ones, the ones most easily "cured"; the more durable and constant symptoms, which are notoriously harder to remove, are proving more adequate outlets for the pathogenic affects in question. There is, therefore, a considerable measure of hungry needs and desires ready to attach themselves to any suitable

object that may present itself, and it is the attachment of these to the idea of the physician that constitues the process called transference. When the affects transferred are of a positive nature, *i.e.*, of attraction, a psychical *rapport* is set up between the patient and the physician, on of course the patient's side only; when the patient cannot transfer these to the physician, he says that he finds the latter "unsympathetic," and usually he soon leaves him. This *rapport* psychologically consists in an unconscious fusing of the two personalities ("identification") in the mind of the patient, and depends on the feminine component of the sexual instinct; it is identical with the pleasurable obedience that the child first experiences in regard to his parents, and which is the source of his docility and compliancy towards them.

The psychical *rapport* just described is the same as what we termed above "affective suggestion," which is the basis of the readiness to accept verbal suggestions. It is found in its highest degree in the familiar condition known as hypnotic *rapport*, in which the subject is totally absorbed in the thought of the operator, and is so oblivious to the outside world that it may be quite impossible for a third person to enter into communication with him. The state bears the closest resemblance to the feeling existing between devoted lovers when in each other's company, and the same analogy can be drawn in connection with the states that follow the *séance* in the case of patients who have been repeatedly hypnotized. Janet gives an excellent description of these, dividing them into three: (1) A period of temporary fatigue; (2) one of what he terms "somnambulic influence," which is characterized by an exalted sense of well-being, with a more or less complete disappearance of previous symptoms and troubles, and (3) one of what he terms "somnambulic passion," characterized by a recurrence of the troubles, a tormenting unrest, and a craving to be hypnotized anew. In both of the latter the patient is greatly preoccupied with the constant thought of the physician, and Janet's description of the patient's mental attitude towards the physician leaves no doubt as to the sexual nature of the whole process. Time does not allow me to point out the essential part played by sexual matters in the types of procedure employed to induce hypnosis, and also in the

various hypotheses concerning hypnotism that have at different times been promulgated. I will only remark that, in the latter, domination of the subject by the hypnotist, and infusion into him of some vital essence, whether a magnetic fluid or a psychical influence, play a prominent part.

Returning now to the question of treatment, we may first define the relation of suggestion to psycho-analysis. As in this treatment various repressed affects, which have arisen in past experiences of the patient with other people, are one by one transferred to the physician, they are traced to their source, when the patient realizes their evidently sexual nature. He thus obtains control over the secret wishes and desires that previously had found unsatisfactory expression in the creation of different symptoms, and they are now free to be applied, by "sublimation," to non-sexual, social aims. The criticism sometimes made, that the brilliant results of psycho-analysis are merely brought about by suggestion, betrays a complete ignorance of what actually happens, and is easily answered by the following objective consideration: Most members of the Freud school had practised with various forms of suggestion and hypnotism before learning the psycho-analytic method, and their experience is unequivocal as to the remarkable difference in the results they can obtain in the two ways. It would be absurd to maintain that suggestion is enormously more potent when unconsciously used by the physician than when he consciously cultivates it with all the means in his power; further than this, the affective *rapport* due to transference, which is the very substance of suggestion, is in psycho-analysis deliberately observed, and its effects neutralized as they arise.

Janet has convincingly shown in the case of hypnotic treatment that the beneficial results obtained essentially depend on the somnambulic influence, or preoccupation with the thought of the physician, which is identical with what we have called affective suggestion, *i.e.,* the transference of positive affects. Investigation of patients that have been treated by various methods enables one to formulate the general statement that in all except the psycho-analytic the same rule holds, namely, that affective suggestion is the principal cause of the beneficial results. This applies both to the different psychotherapeutic measures,

persuasion, "rational re-education," hypnotism, suggestion, and simple encouragement, and to the physical ones, such as electrotherapy, gymnastics, massage, Weir-Mitchell treatment, and so on. The mode of action of suggestion in therapeutics is as follows: The repressed sexual affects are withdrawn from their previous expression in various symptoms, and become attached to a more suitable object, namely, the person of the physician. Psychologically, this merely means the replacement of one symptom for another, namely, abnormal psycho-sexual dependence on the physician; the underlying pathogenic mechanisms remain the same, the complexes merely undergo a little further displacement, and are not resolved.

In spite of the exaggerated claims made by professional hypnotists and others, it is widely recognized that the *permanent* results obtained by the use of hypnotism and suggestion leave much to be desired. Mild cases of psycho-neurosis may without doubt be lastingly benefited in this way, though even here success is very inconstant and uncertain; but as regards the more severe cases, critical experience has an all too dissolving effect on the optimism that is often preached. Again and again relapses occur; one symptom is removed only for another to take its place, and chronic nervous invalidism in spite of all efforts is a spectacle familiar enough to every practitioner. In these cases the tendency of the affective processes to flow in the old channels is so fixed that the new outlet can be kept efficient only by renewal of the opportunity for transference, in the form of close intercourse with the physician and maintained interest on his part. Into the inconvenient and detrimental effects of this we need not here enter; they contrast very unfavourably with the results obtained by psycho-analysis, which aims at restoring the complete independence of the patient by giving him control over the pathogenic agents. It is only when these are traced to their source that it becomes possible to deprive them of their power for harm, and to set free their activity so that it may be devoted to more useful social functions. Freud's work, therefore, has given us not only an insight into the nature of suggestion, but also the power to affect for good the processes that underlie it.

CHRONIC PROGRESSIVE DEAFNESS*

BY CHARLES M. STEWART, M.D., M.R.C.S. (ENG.)

Member Royal Society of Medicine, London; Assistant, Ear, Nose and Throat Department, Toronto General Hospital; Late Senior Resident Surgeon, the Throat Hospital, Golden Square, London.

Deafness may be divided into:

A. Suppurative.
B. Non-suppurative.
 (*a*) Cerumen.
 (*b*) Nerve.
 (*c*) Otosclerosis.
 (*d*) Catarrh—Middle Ear. (1) Exudative. (2) Adhesive.

It is to the adhesive variety that my paper shall be confined. It has many different names:

Chronic progressive deafness.
Chronic catarrh otitis media.
Chronic catarrh middle ear.

This special variety of deafness should be exceedingly interesting to the aurist on account of its prevalency, and also because of its amenability to treatment. It is present in about 35 per cent. of all ear affections. In a young branch of medicine like otology, it is difficult to make an absolute classification of diseases. The above classification will do for a working basis at present. True, two or more pathological conditions often occur in the same ear, and so it makes it difficult to say to which class the disease primarily belongs.

Chronic progressive deafness comes on insidiously without warning or without pain or discomfort, and it is only when the patient is quite deaf that he comes to you for relief. It is usually between the ages of 20 and 40 that these patients first come under notice, but the damaging influences have been at work for many years before. These individuals may have a family history of rheumatism, gout, tubercle or syphilis, or they

*Read before the Academy of Medicine, Toronto, Special section, Eye, Ear, Nose and Throat, March, 1910.

may not, but so much the worse for their ear conditions if they have.

Anatomically and developmentally, the Eustachian tube, tympanic cavity and mastoid antrum are very closely related to the naso-pharynx. They are all an extension from oro-nasal cavity, and have nothing to do with the ear proper. Their relation to the labyrinth is only accidental. The labyrinth is developed from a distinct and separate otocyst. Several of the lower types of animals only have an internal ear. The mastoid antrum is related to the naso-pharynx in much the same way as is the maxillary antrum or sphenoidal sinus.

So the arterial, venous and lymphatic circulations are very intimately related in the nose and naso-pharynx. Nasal obstruction, caused either by turbinal congestion or adenoid vegetations, causes a stasis around the pharyngeal orifice of the Eustachian tube. This dams back the blood and lymph along the Eustachian tube, and soon it becomes stenosed by swelling. The tympanic cavity is then shut off from its normal relation to the atmospheric air. As the circulation goes on in the tympanum, oxygen is taken up from the contained air, and CO_2 is given out; but the volume of the CO_2 given off is 1-50 less than the oxygen taken up, so there is a tendency to form a vacuum. Nature, to prevent this, forces in the drumhead. On account of this negative pressure in the tympanum, more blood is invited to the mucous membrane in this cavity. The blood vessels become greatly distended, and soon a serous discharge takes place into the tympanic cavity. So, from this, we see the great cause of an exudate or congestion in the middle ear is due to nasal obstruction. Now chronic adhesive catarrh follows on the exudative variety, or goes hand in hand with it. The condition of the mucous membrane in the nose and naso-pharynx is an index to the condition of the same in the tubo-tympanic cavity. If there is nasal obstruction, there is tubal congestion, forming complete or partial stenosis of the tube, tympanic congestion and exudate follows.

Frequent tubal congestion becomes chronic tubal congestion; œdema and round-celled infiltration follows. Fibrous connective tissue develops, and so an organic stricture is produced.

The great cause of nasal obstruction is "cold in the head."

This may be due to adenoids, turbinal congestion (which is so very common in the Hebrew race), exposure to cold, bad hygienic conditions, etc. Smoking to excess, alcoholic beverages, too high living, all produce a rhino-pharyngitis, and so congestion of the Eustachian tube.

For example, take the case of what is commonly called a cold in the head. The individual may be quite deaf for days. The Eustachian tube is blocked; the tympanic cavity is all congested, and edematous on account of the unbalanced intravascular pressure; the drumhead is much depressed in front and behind the manubrium. The short process of the malleus is very prominently outwards, and the handle of the malleus is taking an oblique position. The lower part of the drum may be fairly normal in color, but the upper part is likely to be congested. Deafness and tinnitus are the two prominent symptoms. The different joints in the tympanum, namely:

1. Malleo-incudial,
2. Incudo-stapedial,
3. Stapeo-vestibular,

share in this congestion. The ligaments at these joints become edematous and thickened; later on, fibrous tissue forms, and the result is a totally or partially fixed joint. As the drumhead is forced in by atmospheric pressure, so the chain of ossicles is pushed in; therefore the foot-piece of the stapes presses unduly hard on the labyrinth, and so tinnitus results. Congestion of the labyrinth may also contribute to the formation of tinnitus.

Nasal obstruction is easily diagnosed, but intermittent nasal obstruction is more difficult, and its evil results are just about as bad as continuous nasal obstruction. On examination, the nasal chambers look fairly normal. Closely questioning the patient, it may be found that when lying down one nostril is usually obstructed. In the horizontal position the blood gravitates to the head, and especially to the cavernous tissue. This intermittent nasal congestion of the inferior turbinate makes a groove on the nasal septum, and on careful examination this may be made out. In such cases you will often have the information volunteered that the throat, lips and tongue are dry on waking. This symptom, with the marking on the septum, is quite enough

to make the diagnosis of intermittent nasal obstruction. Patients with this condition usually suffer from dyspepsia, and their excretion of uric acid is below normal. The effete material in the circulation poisons the vaso-motor nerves, and so they lose their grasp on the blood vessels, especially the ones in the inferior turbinal area.

Diagnosis.

1. Appearance of the drum.

There are two chief features:

(*a*) Opacities. These may be localized or may be general, extending over the whole drumhead. The localized ones are often cresentic in shape and of a grayish white color. Occasionally the color is a chalk-white, and this is due to a deposit of Ca CO_3. There is often a circular white rim around the periphera of the drum, resembling the arcus senilis in the cornea. In the later stages of the disease, the drum becomes very thin, resembling isinglass. The drum is usually very much indrawn, and the anterior and posterior folds come out very prominently. The Seigle speculum shows the drum to be nearly immobile.

(2) The Eustachian tube is partially or completely stenosed.

(3) Weber's test.—When the disease is unilateral, the sound is lateralized to the diseased ear.

(4) Rinne's test.—Rinne is negative, and there is a failure to hear lower tones.

(5) Schwabach.—There is a lengthened perception of tones of the tuning-fork through the cranial bones.

Prognosis.

If the disease is of long duration, and not a high degree of deafness, tinnitus not being bad, and the auditory nerve normal, the prognosis is good.

But if the deafness is very great, and has come on rapidly, with severe tinnitus, the prognosis is bad. If the disease is unilateral it is likely to soon become bilateral.

Treatment.

The treatment of nerve deafness should be left to the physician. The general treatment for arterio-sclerosis is usually all that is useful. Local treatment is useless. Otoscle-

rosis is practically hopeless, and it makes very little difference who treats it.

But patients suffering with chronic adhesive catarrh of the middle ear belong entirely to the aurist, and by careful and persistent treatment a great deal can be done to relieve their tinnitus and improve their hearing.

Preventative Treatment.

Every child that comes under our care we should see that the naso-pharynx is clear of adenoid tissue, and that the inferior turbinate is not unduly large. Often I think hospital patients get better treatment than our private patients. In hospital practice we do not hesitate to recommend an operation if we think it may do some good. But, rather different in private practice, operation must be the last resort. A small amount of adenoid tissue in the naso-pharynx, together with slight enlarged posterior ends of the inferior turbinate, may produce deafness later on in life. In the hospital patient these would be operated on; in private practice, not likely. The removal of adenoids and turbinal hypertrophies is safe, and can do no harm, and may do a great deal of good.

Curative Treatment.

In hospital practice it is a common occurrence to see patients attend for years, once every two or three weeks, for treatment for this affection. It is often surprising how much good they get. It is next to impossible to stop them from attending. They are really sincere, and have not got the hospital habit.

In private practice we would feel guilty having patients attend in this manner. True, very little can be done in two or three treatments, and that is usually the extent of the attendance of the private patient. I think it is a good rule to ask a private patient to come once a week for three visits, and if the improvement justifies it, to continue coming once a week until improvement ceases; then to attend once a month in winter and once in two months during the summer. This would be nine treatments in the year. Possibly this will not improve the condition, but it will keep things at a standstill.

How to prevent taking cold. If possible, have patient select a suitable climate, and an occupation that does not lead to great

exposure to cold and wet weather. Cold, damp and moist climates are bad. Living in basements, and the absence of sunlight are contra-indicated. The ideal climate is a dry and sunny atmosphere, with a high altitude.

Clothing.

Wear woollen or silk and woollen undergarments all the year round. The clothing should not be heavy, but should be evenly distributed over the body. Do not muffle up the neck. Keep the feet warm and dry; avoid silk socks. At night wear woollen garments. Bedclothing should be light in weight, but sufficient to keep warm. Sleep always having the windows open, but not in a draft.

Food.

Avoid alcohol, condiments, tobacco. If dyspeptic or gouty, avoid starch and sugar.

Exercise.

Any exercise that causes fatigue is harmful. Walking and riding are the best. Avoid any exercise that causes perspiration.

Baths.

If robust, a cold plunge or a cold sponge every morning.

If less robust, a warm bath at night and a cold sponge in the morning. These baths act as vaso-motor tonics.

Respiratory Exercises.

Frequently children and even adults do not breathe through their nose while awake, not because they have nasal obstruction, but simply because they have the habit of mouth-breathing.

In such cases Mr. Parker recommends the patient to lie down flat on the back, having the shoulders slightly raised by a book wrapped up in a towel; grasp the head of the bed with the hands, and, with the lips tightly closed, take long, deep respirations, 18 to the minute, for five minutes night and morning. Do this for a month, and soon you will note a great difference in nasal breathing.

Nasal Sprays and Douches.

They are injurious to the delicate ciliated epithelium of the nose. They should only be occasionally used, and then of the

mildest kind. A weak alkaline spray, having the same osmotic tension as the blood, is best.

The vitality and usefulness of the nasal epithelium is often destroyed by too strong and too frequent sprays. Several times have I seen anosmia produced by prolonged use of carbolic sprays.

For intermittent nasal obstruction, Mayo Collier recommends the following:

℞ Menthol grs. xxx.
Cocaine grs. x.
Ol. Amygdalae ℥ss.
Paroleine, ad ℥i.

For Nebulizer.

Diagnosis and treatment of Eustachian obstruction:

Diagnosis.

Inspect the drum when the patient

(1) Sniffs.
(2) Inflation by Valsalva's method.
(3) Politzer's method, with otoscope.
(4) Eustachian catheter, with otoscope.

The amount of constriction can be estimated by an auscultation tube. Strictures due to swelling of the mucous membrane are inconstant in pitch and often accompanied by mucous rales.

Strictures due to connective tissue. The sound is faint or entirely absent, and remains unchanged by the act of swallowing.

To preserve hearing we must keep the Eustachian tube open.

Valsalva's method is a dangerous one to teach patients. If it gives them relief they use it too frequently, and soon get relaxed drums.

Politzer's method is probably the best of all methods. It certainly is the most suitable to the young and old. True, it affects the sound ear as much as the diseased one, but this does not signify much.

Eustachian Catheter.

Always use cocaine in the nose before passing the catheter; should never make the nose bleed. If the patient is very nervous, the irritation of the catheter around the orifice of the tube causes congestion, and so does more harm than good. The

catheter should not be used more than three times a week at the most.

Bougies.

It is impossible to permanently cure an organic stricture. Bougies are useful to confirm the presence of such a stricture, but their use will never cure it. The indiscriminate use of bougies is to be condemned. The mechanical irritation to the strictured part of the tube only aggravates the trouble. I have used bougies in many cases where I am sure they did good. If used, they should be left *in situ* for about ten minutes. The ideal case to use them on is a stricture due to swelling, and where it is impossible to force air up the tube. Introduce a few drops of cocaine and adrenalin up the catheter; then introduce a small-sized bougie, and after its withdrawal force up air by the use of an Eustachian catheter.

Many different solutions, vapors and medicated oils have been injected up the Eustachian catheter into the tubo-tympanic cavity. It is doubtful if any are really useful. The one I have been using lately is:

Iodine, grs. ii.
Blandine, ad ℥i.

Politzer likes the muriate of pilocarpine. With it I have no experience. I have used it by injecting subcutaneously in four patients, with no good results. These drugs stimulate the mucous membrane, and possibly aid the vascular and lymphatic circulations.

Drugs.

They are of little use except in special diathesis.
Lymphatic—Give salines.
Anemic—Give iron and arsenic.
Gout and Rheumatism—Give colchium and aspirin.
Syphilis—Give potassium iodide.

For Tinnitus Aurium.

Treat the general health. Avoid worries. Give nerve sedatives, such as sodium bromide or hydrobromic acid. Blister the mastoid process occasionally with liquor epispasticus or strong liquor iodine. Sleep with the head high, two or three pillows.

Fibrolysin.

I have used it on five cases, injecting it subcutaneously, two injections twice a week for twelve doses. During its use the Eustachian catheter was used twice weekly, and also pneumo-massage to the drum. In three cases there was considerable improvement to the whispered voice; but now, since its use has been discontinued, they have gone back, and one even worse than before. In the other two cases there was no sign of improvement.

I have tried its use locally on 10 cases. Injected it up the Eustachian catheter, and also applied it to the drum externally. The results were discouraging. In one case an acute otitis media was produced, which, however, soon cleared up on treatment.

The most suitable cases to use it on are old suppurative cases that have a large perforation in the drum.

Vibratory
Electrical
Delstauches

massage sometimes give relief to tinnitus.

Manual massage to the mastoid process, and down the neck behind the angle of the jaw, often gives considerable relief.

The ideal case for massage treatment is one with a cloudy drum not retracted nor atrophic, but immobile.

Operations.

On the nose and naso-pharynx; adenoids and tonsils should be removed if present. A large buried tonsil will push the posterior pillar backwards, and so congest an area around the Eustachian tube.

Deflected Septum.

Frequently a deaf ear is on the side of a deflected septum. The septum interferes with the normal air currents in the obstructed nostril and naso-pharynx, and keeps the mucous membrane at the orifice of the Eustachian tube wet and sodden.

If the inferior turbinate is large and pendulous, anterior and posterior turbinectomies should be done. While in London

I saw a good many complete inferior turbinectomies done for deafness. In many cases the hearing and tinnitus were improved, but the nasal condition was followed by something akin to atrophic rhinitis.

The ordinary method of removing a posterior hypertrophy of the inferior turbinate does not remove any bone, so I did a number of cases in the following manner: With the patient under anesthetic, a spokeshave is placed behind the turbinate, and then withdrawn half an inch; in this way the posterior half-inch of it is freed from the outer wall of the nose. The spokeshave is then pushed back and withdrawn from the nose. The wire of a snare is then introduced in the incision and the posterior half-inch of the inferior turbinate is removed. Doubtless there would be much less congestion around the pharyngeal orifice of the Eustachian tube afterwards, and I am quite satisfied that the Eustachian tube was made much freer.

Operations on the Drum and Middle Ear.

These are nearly all useless. If it were possible to permanently establish a perforation in the drum, in many cases great relief to tinnitus and improvement in hearing would result. But at present this seems quite impossible. Cutting the anterior and posterior folds sometimes gives considerable temporary relief.

Tenotomies are difficult to perform, and the results are very uncertain. I have seen several ossiculectomies done for noises and improvement of hearing. In most of the cases there was a temporary improvement, but in every case they were much worse in six months afterwards. I once assisted in doing a radical mastoid operation for the relief of tinnitus. Temporary relief only followed.

For Home Treatment.

The two best means of keeping the hearing up to the mark is the use of the Seigle Speculum once a day, and the Politzer bag two or three times a week.

142 Carlton Street.

Canadian Journal of Medicine and Surgery

Editor:
J. J. Cassidy, M.D.
45 Bloor St. E., Toronto

Managing Editor:
W. A. Young, M.D., L.R.C.P., Lond.
145 College St., Toronto

Surgery:
F. N. G. Starr, M.B., Toronto, Associate Professor of Clinical Surgery, Toronto University; Senior Surgical Assistant, Toronto General Hospital; Surgeon, Hospital for Sick Children, Toronto; N. A. Powell, M.D., C.M., Professor of Medical Jurisprudence, Toronto University; Senior Assistant in charge, Emergency Department, Toronto General Hospital.

Clinical Surgery:
Alex. Primrose, M.B., C.M., Edinburgh University; Associate Professor of Clinical Surgery, Toronto University; Secretary Medical Faculty, Toronto University; Surgeon Toronto General Hospital; and Herbert A. Bruce, M.D., F.R.C.S., Eng., Surgeon, Toronto General Hospital.

Orthopedic Surgery:
B. E. McKenzie, B.A., M.D., Toronto; Surgeon to the Toronto Orthopedic Hospital; ex-President of the American Orthopedic Association; and H. P. H. Galloway, M.D., Winnipeg, Man., Member of the American Orthopedic Association.

Physiology:
A. B. Eadie, M.D., Toronto.

Medical Jurisprudence and Toxicology:
Arthur Jukes Johnson, M.B., M.R.C.S., Eng., Coroner for the City of Toronto; Surgeon Toronto Railway Co., Toronto; W. A. Young, M.D., L.R.C.P., Lond., President of the American Medical Editors' Association; Associate Coroner, City of Toronto.

Physiotherapy:
Chas. R. Dickson, M.D., C.M., Queen's University; M.D., University of the City of New York; Electrologist Toronto General Hospital, Hospital for Sick Children and St. Michael's Hospital.

Pharmacology and Therapeutics:
A. J. Harrington, M.D., M.R.C.S., Eng., Toronto.

Pediatrics:
Allen Baines, M.D., Toronto; Associate Professor Pediatrics, University of Toronto; Physician, Hospital for Sick Children; A. R. Gordon, M.D., Toronto; Senior Medical Assistant, Toronto General Hospital; Helen MacMurchy, M.D., Toronto, Editor, The Canadian Nurse.

Dermatology:
D. King Smith, M.B., Tor., Toronto; Demonstrator in Pathology, Toronto General Hospital.

Medicine:
J. J. Cassidy, M.D., Toronto, ex-Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; W. J. Wilson, M.D., Toronto, Physician, Toronto Western Hospital; and Dr. J. H. Elliott, ex-Medical Superintendent, Gravenhurst Sanatorium, Ont.; Associate Medicine and Clinical Medicine, University of Toronto; Senior Medical Assistant, St. Michael's Hospital.

Clinical Medicine:
Alexander McPhedran, M.D., Professor of Medicine and Clinical Medicine, Toronto University; Physician, Toronto General Hospital; Lewellys F. Barker, M.D., Professor of Medicine, Johns Hopkins University, Baltimore, Md. H. B. Anderson, M.D., Toronto; Associate Professor of Clinical Medicine, University of Toronto; Physician, St. Michael's Hospital.

Bacteriology:
J. G. Fitzgerald, M.D., Lecturer in Bacteriology, University of Toronto.

Mental and Nervous Diseases:
N. H. Beemer, M.D., Mimico Insane Asylum. Campbell Meyers, M.D., M.R.C.S., L.R.C.P. (London, Eng.), Private Hospital, Deer Park, Toronto.

Gynecology and Obstetrics:
Geo. T. McKeough, M.D., M.R.C.S., Eng., Chatham, Ont.; and C. F. Moore, M.D., Toronto.

Pathology:
W. H. Pepler, M.D., C.M., Surgeon Canadian Pacific R.R., Toronto; Junior Medical Assistant, St. Michael's Hospital; and J. J. Mackenzie, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology:
J. M. MacCallum, M.D., Toronto, Senior Assistant Eye Department, Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Nose, Throat and Ear:
Perry G. Goldsmith, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb; Senior Assistant Ear, Nose and Throat Department, Toronto General Hospital.

Address all Communications, Correspondence, Books, Matter regarding Advertising, and make all Cheques, Drafts and Post-Office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

Reprints supplied Authors at Cost.

Editorials

POISONING BY MERCURIC CHLORIDE THROUGH VAGINAL DOUCHES

Mercuric chloride vaginal douches given after labor may prove very dangerous. Dr. H. Jellett, Manual of Midwifery, p. 154, says on this subject:

"The use of corrosive sublimate solution for douching purposes is not to be recommended. In the first place, even in very weak solution, it is occasionally attended with unpleasant consequences, as it affects different patients in different degrees of severity. Severe nephritis has resulted in some cases and death has followed the injection of a quart of corrosive sublimate solution of a strength of 1 in 1,000."

A danger of a very unusual kind, arising from the use of the mercuric chloride douche after labor, was noted at the clinic to the profession, Toronto General Hospital, January 4, 1911. A patient was presented there, who, subsequent to labor (in private practice) had been attacked with general peritonitis. It appears that her medical attendant, wishing to give a uterine mercuric chloride douche, was so unfortunate as to perforate the softened uterus of the patient and discharge the douche into her peritoneal cavity. The ensuing peritonitis, the etiology of which was remarkable, was of extreme severity, but, fortunately, the patient escaped with her life.

In non-puerperal women mercuric chloride vaginal

douches are dangerous—especially in the case of women suffering from Bright's disease. A fatal case of poisoning by mercuric chloride contracted through vaginal douches was reported in the *A. M. A. Journal,* June 4, 1910, by Dr. Patek. The patient, an unmarried woman, aged 35, had used vaginal douches, prepared by dissolving tablets of corrosive sublimate in water, but the strength of these solutions was not known to Dr. Patek. Inflammation and edema of the labia and vaginal tract of the patient were noted January 19, 1910. Constitutional symptoms of mercuric poisoning were also noted about that date, *viz.,* vomiting, diarrhea and anuria. A specimen of her urine, withdrawn by catheter, revealed abundant albumin, epithelial cells, hyaline casts, blood and pus, indicating nephritis. After an illness of eleven days the patient died of nephritis, caused by corrosive sublimate. As the patient had not taken mercury by the mouth, its absorption, in toxic quantities, must have occurred through the vagina. She may also have had Bright's disease, which would render her peculiarly susceptible to mercuric poisoning. J. J. C.

THE SURGICAL ANATOMY OF THE FACIAL VEIN

A PHLEGMONOUS inflammation of the face, following a poisoned wound, may set up thrombosis of the facial vein, and detached portions of the clot may give rise to purulent foci in other parts of the patient's body. On account of the communications of the facial vein

with the cerebral sinuses, these purulent foci may extend upward into them and so induce a fatal issue. The anatomical reasons for this result are worth remembering. The facial vein is not so flaccid as are most superficial veins, and, in consequence of this, remains more patent when divided. It has, moreover, no valves. It communicates freely with the intracranial circulation, at its commencement, by its tributaries, the angular and supraorbital veins, communicating with the ophthalmic vein, a tributary of the cavernous sinus, and also by its deep branch, which communicates, through the pterygoid plexus, with the cavernous sinus, by branches which pass through the foramen ovale and foramen lacerum medium.

An exemplification of the futility of treating a septic inflammation of the face with hot fomentations and poultices, to the exclusion of the scalpel, is given in an article published by Albert E. Campbell, M.D., in the December, 1910, number of the *Medical Summary,* Philadelphia. The author says: "A man came into my office, early in 1888, complaining of a small furuncle on the end of his nose and another commencing on the upper lip, near the ala of the nose. In three or four days the face and nose were swollen enormously, the eye on the right side was closed. An old army surgeon was in town the same day, and I asked him to see the case with me. He advised poulticing and keeping up hot applications to hasten suppuration. In the *Medical Journal,* 1887, was a review of a paper on this subject, in which the writer directed attention to the malignancy of all septic in-

flammations in this region, which he attributed to the anatomical relations of the parts. I recalled this article to the old surgeon and urged that active surgical measures be adopted; but he hooted at the idea of any danger, and, as the patient and friends were averse to the use of the knife, it was not used and hot applications were continued. But the swelling increased and the young man became comatose and died within a few days of pyemia."

It is quite evident that, as Dr. Campbell says, the medical attendants in this case, instead of employing poultices and hot applications to hasten suppuration, should have relieved the tension of the tissues by free incisions. The septic foci should have been made to discharge outwards, instead of being allowed to travel upwards, through the angular vein and the ophthalmic vein, to the cavernous sinus. J. J. C.

RESPECTING FOREIGN-BORN CONSUMPTIVES AT THE TORONTO FREE HOSPITAL FOR CONSUMPTIVES

At pp. 110-111 of this issue appear two letters, one by Edward Gurney, Esq., Toronto, and the other by Dr. P. H. Bryce, Chief Medical Officer of the Department of the Interior, Ottawa. The latter gentleman's letter is a reply to the former, though both letters were sent to the editor. It came about thus: to Mr. Gurney's letter of January 9, 1911, the first in order of time, an acknowledgement was sent January 11, 1911, asking if all or any of the foreign-born patients

treated at the Toronto Free Hospital for Consumptives during the year ending 30th September, 1910, had arrived in Canada during the twelve months prior to that date, and mentioning that Dr. Bryce's annual report referred to in the editorial published in *C. J. M. S.* for January was for the year ending March 31st, 1910. On the same date (Jan. 11, 1911) we sent a letter to Dr. P. H. Bryce, giving him the purport of Mr. Gurney's letter to us, together with a quotation from Mr. Gurney's statistics, and asking Dr. Bryce if he wished to say anything on the question. Dr. Bryce's reply is before our readers. So far we have not heard further from Mr. Gurney.

J. J. C.

THE INFANTILE MORTALITY RATE OF ONTARIO IN 1908

According to the last report of the Registrar-General of Ontario, being for the year ending December 31st, 1908, there were registered 32,714 deaths, which is a death rate of 14.06 per thousand, the estimated population being 2,226,860. By deducting 1,767 still births, the total mortality for the year becomes 30,947.

The total deaths of children under one year being 8,662, on deducting 1,767 still births, we find a mortality of infants under one year of 6,895, or 22.28 per cent. of the total deaths, a rate which compares favorably with that of England and Wales, in which the deaths under one year are usually some 25 per cent.

of the total deaths. The total live births in Ontario for 1908 being 55,388, the rate of infantile mortality is 124.28 per one thousand births, whereas in England and Wales in 1894 the infantile mortality rate was 137; in 1896 it was 147.5.

Infantile mortality is always high in slums or in manufacturing towns, where married women are largely employed in factories, and are unable, even though so inclined, to give that personal attention to their offspring which is bestowed by mothers whose occupations are domestic. The infantile mortality rate in Toronto in 1908 was 159.49, almost the same as that of London (Eng.) in 1896, which was 159. Very much higher was the infantile mortality rate in "mill towns," such as Preston (Eng.), which, in 1894, had a rate of 229, and, in 1896, a rate of 262. In Massachusetts, in the decade 1881-1890, the infantile mortality rate averaged 174.9 in the cities and 129.5 in the country. In the Massachusetts "mill towns" the infantile mortality rates were 239.7 for Fall River, 222.5 for Lowell, and 213.9 for Lawrence, while Boston, commercial, manufacturing and residential, showed 188.2.

Expressed in medical terms, the 6,895 deaths under one year in Ontario in 1908 are accounted for in the report as follows: Congenital debility, 1,811; premature births, 788; malformations, 158; diseases of the digestive system, 1,655; diseases of the respiratory system, 701; diseases of the nervous system, 594; ill-defined diseases, 569; epidemic diseases, 305; other general diseases, including tuberculosis, 109; diseases

of the circulatory system, 88; violence and other external causes, 65; diseases of the genito-urinary system, 29; diseases of the skin, 7; diseases of the locomotor system, 6.

The influence of heredity would be an important factor in causing the deaths ascribed to congenital debility, premature births, and malformations. Heredity might also account for deaths due to tuberculosis of the lungs and other organs, such as the meninges of the brain. Neglect, ignorance or carelessness were responsible for many diseases of the digestive system, diseases of the respiratory system, diseases of the nervous system, such as convulsions, and, doubtless, also, for some ill-defined diseases. Insanitary surroundings would determine a share of the infantile mortality in Ontario, how large a one is uncertain. However, it may be remarked that deaths from epidemic diseases were not numerous, forming but 4.42 per cent. of the total deaths under one year.

Industrial conditions, not hardness of heart or even ignorance, are responsible for the neglect of infants, since mothers in employment return, as soon as possible after confinement, to their work, and entrust their offspring to the care of older children and others, by whom they are improperly fed and, often, badly looked after. During pregnancy, also, the woman remains at work up to the last moment, so that her absence is limited to that period during which she is absolutely incapacitated. The rate of infantile mortality among illegitimate children in older countries is said to be about double that of

children born in wedlock. In Ontario, of the number of births registered, 819 were born out of wedlock; but the number of these infants which perished during the first year of life is not specially mentioned.

As the growth of manufactures in some cities and towns of Ontario, during the next decade, will so alter the occupations of married women as to produce in Ontario infantile mortality rates like those recorded of "mill towns" in England and the United States, it is to be hoped that the recommendations of the Registrar-General will be carefully weighed by the Legislature and Provincial Government. They are: That legislation be enacted providing for the education of girls and boys in the duties and responsibilities of motherhood and fatherhood, and a knowledge on their part of the food supply of infants which are not breast-fed. Other lines on which legislation is recommended are: the housing of the poorer classes of the people in detached houses or cottages, the prohibition, under certain conditions, of tenement houses, and the systematic medical inspection of schools, which would powerfully lessen the spread of communicable diseases among children. J. J. C.

THE PRACTICE OF "FEE SPLITTING" BETWEEN THE PHYSICIAN AND THE SURGEON

In reading the paper by Dr. Matthew Mann of Buffalo, N.Y., entitled "Dividing Professional Fees," and which appeared recently in *The Buffalo Medical Journal,* all that can be done seems to merge itself into a half-whispered question of "Is this also true of Canada?" Safely, we may assert, for our faith in our brother man is still strong, "Not as yet perhaps as rampant as elsewhere, but rapidly becoming so."

Only men who are a disgrace to the name of surgeon and physicians who can command but contempt from their profession at large indulge in such degrading commercialism. A great surgeon must be first a great man, the very pose and accuracy of judgment demanded by his art causes Mother Nature to put her stamp of nobility on him. He must conquer by skill. The masters of surgery are few in number. It is to them that the younger men must look for instruction and ideals.

The little knife sharpers and cutters who abound in this day and generation, and who, frequently without careful diagnosis, just keep on cutting till they find something—or nothing—are sooner or later thrown aside when, unfortunately, the death roll of hospital or the wagging tongues of neighbors tell the tale. From this class come the miserable men who stoop to such a despicable practice so as to increase their bank account and, in order to get from the

country or city doctor cases, offer to divide the fees. The efficient surgeon is not made in a minute; he must begin at graduation and keep on through hospitals and universities, at home and abroad, for many moons ere venturing to announce himself a surgeon. Thanks to skill and antiseptic surgery, "That younger daughter of Science and Genius," more lives have been saved than can ever be enumerated.

Why, then, has this "Secret Commission Evil" recently been so widely discussed throughout the different Medical Associations of the United States? Because it is spreading and clutching at the throats of young men who, owing to the overcrowding in the ranks of the profession, are often really in need of ready money. The low standard of medical education is also responsible for the number of bright enough men, but lazy, who enter its ranks, but "Who never considered it necessary to add the incident of learning to the accident of brains."

In speaking of the shrewd money-getting tactics of some men in the United States, a prominent surgeon said: "Over here some of the hospitals supported by philanthropy are simply hotbeds for fee splitting and commission jobbery. The industry is tolerated and winked at because the new method fills the private rooms." Other surgeons compromise by employing the family doctor to administer the anesthetic. This, too, is a mistake. Such a duty should only be allotted to an expert.

The Erie County Medical Society, inspired to action by this evil, has formulated rules and is lead-

ing the vanguard, urging other Associations to prompt action.

Now, we have been busy with the mote in our brother's eye across the line, what about the beam in our own? It is well known in Toronto that this practice has been resorted to by a few more or less obscure medical men who have added a bit of surgery to their other disqualifications and have unfortunately succeeded in pushing themselves into one or other of the hospitals. If we are to exact the respect of the public for our hospitals, each individual member of the staff must, in some one or more respects, live up to the highest surgical standard. As someone has said, "The potency of the individual is greater and nobler than the influence of class, organization or even institution." Now is the time for action on the part of the Academy of Medicine. Let our surgeons, and they are, alas, few, whom the profession at large bow down before and upon whose brow place the circlet of bay leaves, cast out from among them the unclean cowards who usurp their well-earned title and traffic in men's bodies, selling their own decency for half the gain.

W. A. Y.

PERSONAL

Dr. W. H. Pepler has been recently appointed by the University of Trinity College to fill the position on the Council of the Ontario College of Physicians and Surgeons rendered vacant by the retirement of Dr. J. Algernon Temple.

Correspondence

The Editor cannot hold himself responsible for any views expressed in this Department.

Toronto, Jan. 9, 1911.

To the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY, Toronto, Ont.:

DEAR SIR,—I have before me your editorial of January, 1911, which seems to imply satisfaction with the present system of examination at foreign ports of emigrants coming to Canada. I enclose a report, showing the number of Canadian and foreign-born patients treated at the Toronto Free Hospital for Consumptives up to September 30th, 1910, which is not a good showing as indicating proper care in making these examinations. It seems to me that your influence in this matter is of paramount importance, and I therefore suggest that you should examine this statement, which I enclose, and comment on it. Recently a number of us visited Ottawa and interviewed the Minister of the Interior, who was somewhat startled at this statement. He represented to us that there was sufficient law on the statute books to take care of the case, but doubted whether there was public sentiment back of the movement to warrant the Government in putting the law in force. Journals like yours should be able to exert a great influence in creating this public sentiment. I am,

Faithfully,

EDWARD GURNEY.

E.G./O.

Report showing the number of Canadian and foreign-born patients treated at the Toronto Free Hospital for Consumptives up to 30th September, 1910:

Born in Canada, 487, or 47.9%; born in other parts of the British Empire, 404, or 39.7%—87.6%; distributed as follows: England and Wales, 259; Scotland, 63; Ireland, 64; Newfoundland, 11; West Indies, 2; India, 2; Channel Islands, 3. Born in Foreign Countries, 126, or 12.4%—1,017, or 100.0%; distributed as follows: Russia, 42; United States, 25; Roumania, 12;

China, 6; Macedonia, 5; Germany, 5; Italy, 5; Finland, 4; Poland, 4; Austria, 4; Hungary, 2; Syria, 2; Armenia, 2; Iceland, 1; France, 1; New Zealand, 1; Holland, 1; Greece, 1; Switzerland, 1; Turkey, 1; Sweden, 1—126. Summary—Born in Canada, 487, or 47.9%; born elsewhere, 530, or 52.1%.

Of these 1,017 patients 908, or 89.3%, were, at the time of their admission to the hospital, resident in Toronto, while of the remainder 108 were resident in other parts of Canada, and one in the United States.

Ottawa, 14th January, 1911.

Dr. Cassidy, 45 Bloor St. E., Toronto, Ontario:

Dear Doctor,—Your letter of the 11th instant is to hand and contents have been carefully noted.

You may recall the fact that in 1908 a complaint was made by the Board of Trade of the City of Toronto to the Dominion Government, to the effect that in the Tuberculosis Sanatoria, both of Muskoka and Free Hospital at Toronto a notable proportion of the inmates of these institutions were recently arrived immigrants. I made it my affair to at once enquire into the facts by writing to the superintendents in charge of these several institutions, asking them to give me the names, dates of arrival in Canada and dates of admission into the hospitals under their charge of all persons coming under the name of immigrant. I got an answer back from the Free Hospital, Toronto, stating that no list had been kept up to that date of patients in the hospital as regards the date of their arrival in Canada. After urging that the matter was of such importance that I trusted that the officers of the several institutions would take the trouble to get the information asked for, I succeeded in getting a report which gave a list of seventeen inmates who had come to Canada within any comparatively recent period.

Analysis of the cases showed that only in two instances did the history make it clear that the two persons had tuberculosis on their arrival in Canada, and it happened that in both instances they were wives who had come to their husbands. As for the remainder the length of time of their residence in Canada

made it plain that it was as probable that the disease was contracted in Canada as before their coming to this country.

I have taken the trouble on receiving your letter to go through the list of all tuberculous persons who have been reported from any place in Canada to this Department since the beginning of the present fiscal year, and you will find in the following list the total immigrants of which the Department has any knowledge as being tuberculized, and the disposition of each case: The number of cases carried over from 1909-10 to be dealt with was 10.

One arriving January, 1909, and reported 1909; one arriving May, 1908, and reported May, 1909; one arriving June, 1907, and reported February, 1909; one arriving August, 1907, and reported August, 1909; one arriving, 1909, and reported 1909; one arriving April, 1909, and reported October, 1909; one arriving July 25, 1909, and reported February, 1910; one arriving May, 1908, and reported 1910; one arriving (?) and reported 1910; one arriving April, 1908, and reported 1910.

Since April 1st, 1910, to January 15th, 1911, thirty-five cases have been reported to the Department from all Canada, of which the following are reported:

One arriving April, 1909, and reported May, 1910; one arriving November, 1909, and reported April, 1910; one arriving October, 1908, and reported May, 1910; one arriving October, 1909, and reported 1910; one arriving April, 1910, and reported May, 1910; one arriving March, 1910, and reported May, 1910; one arriving September, 1908, and reported May, 1910; one arriving April, 1910, and reported June, 1910; one arriving May, 1910, and reported 3rd June, 1910; one arriving July, 1909, and reported June, 1910; one arriving May, 1910, and reported June, 1910; one arriving May, 1910, and reported June, 1910; one arriving June, 1910, and reported July, 1910; one arriving June, 1907, and reported June, 1910; one arriving May, 1908, and reported 1910; one arriving March, 1910, and reported July, 1910; one arriving May, 1909, and reported 1910; one arriving August 27, 1905, and reported August, 1910; one arriving March, 1910, and reported August, 1910; one arriving July, 1910, and reported August, 1910; one arriving May, 1910, and reported August, 1910; one arriving May, 1910, and reported

August, 1910; one arriving 1906 and reported 1910; one arriving March, 1909, and reported September, 1910; one arriving June, 1910, and reported September, 1910; one arriving November, 1909, and reported October, 1910; one arriving April, 1910, and reported October, 1910; one arriving April, (?), and reported October, 1910; one arriving September, 1910, and reported November, 1910; one arriving December, 1909, and reported November, 1910; one arriving April, 1908, and reported November, 1910; one arriving September, 1909, and reported December, 1910; one arriving August, 1910, and reported January, 1911; one arriving July, 1910, and reported December, 1910; one arriving May, 1910, and reported August, 1910.

The distribution of these is as follows: London, 3; Ft. William, 1; Montreal, 5; Ottawa, 3; —— (?), 1; Winnipeg, 3; Paris, 1; Calgary, 2; Milton, 1; Oshawa, 1; Vancouver, 1; Victoria, 1; Port Arthur, 1; Toronto, 4; ——(?), 1; Saskatchewan, 2; Woodstock, 1; Edmonton, 1; Mormontown, 1; Sydney, 1.

Analyzing those who have arrived since April 1st, 1910, it will be seen that of those who have arrived in 1908 and earlier, there were nine; 1909 there were nine; and of those arriving in 1910 there were seventeen. It is apparent that in seventeen instances where the immigrants arrived since April 1st, 1910, there were a few cases in which their becoming officially known was so soon after their arrival that it is fair to say that such might probably have been diagnosed by the medical inspectors at the port at the time of their arrival.

When it is remembered, however, that since the first of April to the end of September, 1910, 128,819 immigrants were actually inspected at the sea ports, and allowing that the whole seventeen reported, should have been diagnosed, it will be seen that it is just one in 7,577 inspected. It will be for those who choose to investigate the cases who arrived in 1909-1908 and earlier years to determine whether such cases could have been reasonably diagnosd on their arrival at the sea port, or whether it is fairly probable that such have been infected since arrival in Canada. It will be noted that in the list of those reported to the Department, only four of these arrived since April 1st were reported from Toronto. The most that can be said regarding any complaints made by Mr. Gurney or other persons, is that if many

cases exist in the hospitals of the National Sanatorium Association belonging to the class that may be properly called immigrants, it seems strange that they should not have been reported to this Department as being such. It ought not to be difficult for any person further interested in this matter to have an analysis made of the cases which have been in these institutions, as I had made when the complaints were received in 1908. If this is done, I fancy that the results will be very similar to those arrived at at that time.

Taking any stand that we please, such as that of the ordinary death rate of the City of Toronto, which was given in 1908 as 232 deaths from this disease, or representing probably 1,200 cases or five cases for every 1,000 population, it is apparent that the thirty-five cases in the immigrants who have arrived this year, which number is about one-third of the total population of the City of Toronto, is so small as compared with the above number as to be quite negligible.

You have, however, the exact figures so far as I can give them to you for the last year, so that you are in a position to criticize their meaning quite as well as I am.

With best wishes for the New Year, I remain.

Yours faithfully,

PETER H. BRYCE,
Chief Medical Officer.

PERSONAL

HOMEWOOD SANITARIUM FIRE.—It was with extreme regret that the profession read in the daily press a few weeks ago of the disastrous fire to Homewood Sanitarium. This institution has had for years an enviable reputation, having, under the Medical Superintendency of Dr. A. T. Hobbs, done most satisfactory service in the treatment of chronic inebriety and drug addiction. We are pleased to know that the fire was not quite as serious as reported in the daily press, and understand that it is the intention of the Board of Directors to now put up a series of buildings for the different classes of cases that will be second to none on the North American Continent.

News of the Month

THE CHILD

In October of the present year there appeared the first number of a Magazine, entitled as above, evidently intended to rank with the English Reviews, and destined, as we hope, to play a not inconsiderable part in assisting and guiding the remarkable movement childwards that has been so far characteristic of the Twentieth Century, "the century of the child." Among the contributors to the first number were Sir Lauder Brunton, Prof. Griesbach, Dr. Mathieu, Pres. G. Stanley Hall, the Bishop of Ripon, the Earl of Meath, and others whose names would at once be recognized as a guarantee of the value of any periodical.

The second number keeps up the high standard of the first, and, in a word, those who are interested in child welfare for patriotic, philanthropic, professional, or educational reasons, cannot well afford to be without this publication. For instance, Miss M. Louise Greene, of New Haven, the author of a book on "School Gardens," which was published by the Russell Sage Foundation, has here an article on the same subject. She is evidently well aware of the work done in Canada, both by the MacDonald School Gardens, in connection with rural schools, and by private efforts, such as that of the Broadview Boys' Brigade, in Toronto.

"Child Study," at the British Association, and "Fear and the Evolution of the Child" are two philosophical papers of considerable interest, but it is perhaps to the more practical subjects, such as "Respiration in School Children," the "Inspection of Boarded-out Children" and "Child Problems" that greater weight will be attached by most readers.

Altogether, the appearance of the large and well-prepared Magazine is a cheering sign of the times, and we cordially commend it to our readers. It is edited by Dr. Kelynack, and published at Oxford House, Oxford Street, London W., by John Bale, Sons & Danielson, at $5.25 per annum.

CHANGES IN GRACE HOSPITAL STAFF

Dr. C. J. O. Hastings, Medical Health Officer, and Dr. L. L. Palmer were recently transferred from the active to the consulting staff by the Board of Governors of Grace Hospital.

Dr. H. R. Holme was appointed junior anesthetist; Dr. Gilbert Roy, senior to the ear, nose and throat department; Drs. Mortimer Lyon and E. H. McLaren, to the eye department, and Drs. R. C. Griffith and F. Arnold Clarkson were transferred from the outdoor to the indoor medical staff.

The American Journal of Clinical Medicine.—The Eighteenth Annual Progress Number of *The American Journal of Clinical Medicine* is a credit to its publishers. It is indeed a *multum in parvo,* and any physician who has not as yet procured a copy should do so without delay. With this number, the publishers have taken over *The Chicago Medical Times.*

The Canadian Medical Exchange, in charge of Dr. W. Hamill, wishes us to announce that intending purchasers of medical practices should watch every month for advertisements of medical practices for sale in the advertising columns of this journal, but in the intervals they should watch the offers of medical practices under "Business Chances" in the Toronto Saturday *Globe* and *Mail and Empire,* as many practices are sold before the medical publications go to press. He always has from ten to twenty practices for sale in all parts of Canada, and by writing him buyers will secure a short-cut to what they want.

Details of any offer are furnished buyers free, the aim of the office being to bring those who wish to buy in touch with those who wish to sell.

A letter addressed to him, Janes' Building, Toronto, will bring you full particulars as to his methods of how medical practices are bought and sold.

The Physician's Library

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, etc., by leading members of the medical profession throughout the world. Edited by HENRY W. CATTELL, A.M., M.D., Philadelphia, U.S.A. Vol. 3; twentieth series. 1910. Philadelphia and London: J. B. Lippincott Company. 1910.

This quarterly publication is so well and favorably known that commendation is scarcely necessary. The present volume is up to the usual standard and contains many articles of great interest, and covering a wide field of medical practice.

H. B. A.

Gynécologie opératoire, par HENRI HARTMANN, professeur de médecine opératoire à la Faculté de médecine de Paris. Un volume grand in-8 jésus de 500 pages, avec 422 figures dans le texte dont 80 en couleur. Prix: 18 fr. Paris, 1911. (G. Steinheil, éditeur, 2, rue Casimir-Delavigne, Paris.)

The author describes, in this volume, not only gynecology of the sanguinary kind, but also electricity, atmokausis, kinesitherapy, Bier's method and mineral baths, as applied to the treatment of uterine diseases. These latter methods are, however, subsidiary, being introduced because the work is intended to be a full treatise on the treatment of the diseases of the genito-urinary apparatus of women.

Passing rapidly over rare operations, the author dilates on operations of choice, illustrating not only the operation, but every stage of it, with a prodigality of photographs. Referring to the results and indications of each operation, he shows the reciprocal influence of certain operations on ulterior pregnancies, and of pregnancy on the operation, because considerations of such a nature are important in determining the choice of the operation which should be selected.

In doing abdominal celiotomy, the author prefers chloroform to ether as the anesthetic, on account of its effect in procuring

quiet breathing and because, while it does not cause cerebral congestion, it shows its superiority to ether when the patient is placed in the Trendelenburg position. His description of laceration of the perineum in labor and the treatment of the various forms of this lesion are satisfying. Prior to curetting, he prefers to begin dilatation of the cervix uteri with laminaria, which makes the cervix more supple and less likely to tear or split during distension than when metal dilators only are employed.

The author introduces, with acknowledgments, several illustrations taken from Dr. Kelly's work on gynecology.

In a short review, it would not be possible to mention even briefly a portion of the many merits of this work, which reflects the highest credit on its accomplished author. To a surgeon, who reads French, the text is admirable; to one who cannot understand French, Hartmann's *modus operandi,* expressed in Warrisse's illustrations, is very appealing. J. J. C.

Osteology and Syndesmology. By Howard A. Sutton, A.B., M.D., of the Department of Anatomy in the University of Pennsylvania, and Cecil K. Drinker, B.S. Published by P. Blakiston's Son & Co.

An excellent work for the student who has read osteology in one of the larger Anatomies, but not of real value to him who hopes to make use, in a practical way, of osteology.

The work gives practically nothing on the development and the ossification of bone, a knowledge of which is so essential to the anatomist or surgeon.

Its descriptions of bones are short and concise, ending with a summary, so that it would be a help to the senior student or to the practitioner who is reviewing for examination purposes and who already has a general knowledge of his subject.

W. S. V.

Military Hygiene. By R. Caldwell, F.R.C.S., D.P.H., Lt.-Col. R.A.M.C. London: Bailliére, Tindall & Cox. 2nd Edition. 1910.

It is difficult to write for civil practitioners a review of a work so manifestly intended for military medical officers, and so eminently useful to the latter class, every one of whom should own and study it. It is written from the fullness of the writer's

great experience of military life and with great scientific skill and literary charm. The three opening chapters, "The Work of the Microbe," "Immunity," and "Enteric Fever," appeal to readers of both classes, while to the militia medical officers of Canada the chapters on "Sanitary Organization," "Physical Training," "Water," "Air," "Food," "Clothing" and "Refuse Disposal," are of the greatest value. Both are written out of the writer's own experience and as expansions upon the manuals and text-books of the War Office upon these topics.

Towards the end of the book the chapters upon "Alcohol," "Sick Transport," and "Routine Duties," can be fully appreciated only by the medical officer who has read them. The author's allusions to the Canadian medical services, particularly to the work of the Canadian Field Ambulance in South Africa, and to our ambulance wagons, are very kindly and gratifying.

J. T. F.

The Practitioner's Medical Dictionary. An Illustrated Dictionary of Medicine and Allied Subjects, Including all the Words and Phrases Generally used in Medicine, with their Proper Pronunciation, Derivation and Definition. Based on recent Medical Literature. By GEORGE M. GOULD, A.M., M.D., author of "An Illustrated Dictionary of Medicine, Biology and Allied Sciences," "The Student's Medical Dictionary," "30,000 Medical Words Pronounced and Defined," "Biographic Clinics," "The Meaning and Method of Life," "Borderland Studies," etc. Second edition revised. Philadelphia: P. Blakiston's Son & Company, 1012 Walnut Street. 1910.

It is with considerable pleasure that we are in receipt of a copy of the second edition of Dr. Gould's Medical Dictionary. This volume received an exceedingly hearty welcome when it came out in its first edition, and judging from the amount of work by way of thorough revision that has been put in on the second volume, we feel that it should not take long to completely sell out the present edition.

We find this edition to be practically a new work, having been revised by the author from cover to cover. Dr. Gould in this volume supplies the medical practitioner with trustworthy definitions of practically every medical word or term to be found in the standard medical text books. It certainly meets

the needs of the busy physician, being nothing short of a *multum in parvo*. The volume is well illustrated, the text being elucidated by numerous half tone cuts and drawings. We find also quite a number of new features in this edition, including the metric system of weights and measures in doses, etc., the additions and changes of the new pharmacopeia and the recommendations of the new anatomic nomenclature.

Medical Chaos and Crime. By NORMAN BARNESBY, M.D. Mitchell Kennerley, London and New York. 1910.

The writer read with a good deal of interest Dr. Barnesby's book, "Medical Chaos and Crime." It is a work consisting of about four hundred pages, and is divided into, in all, fourteen chapters. The titles of some of the chapters are somewhat alarming, the contents including such chapters as "The Reign of Graft," "Ethics, Real and Criminal," "Education at the Cost of Human Life," "The Unspeakable Quack," "More Surgical Outrages," "The Surgical Novice," "The Amateur Anesthetist," "Hospital Abuses," etc. When reading certain parts of this book, the writer was inclined to say to himself, "Thank God, this condition of affairs does not apply to the medical profession of Canada." We are inclined to think that the author has, at least in parts of his book, considerably exaggerated the true state of affairs. At the same time, we can heartily recommend the book to our readers, as it contains a good deal that is only too true. W. A. Y.

Uric Acid in the Clinic. A Clinical Appendix to Uric Acid as a Factor in the Causation of Disease. By ALEXANDER HAIG, M.A., M.D., Oxon., F.R.C.P., assisted by KENNETH G. HAIG, L.R.C.P., Lond., M.R.C.S., Eng. Philadelphia: P. Blakiston's Son & Co. 1910.

In this volume of 290 pages, Dr. Haig describes the cases on which his previous work was founded. He also adds cases of recent experience bearing on the same subject. In the first chapter he describes his clinical methods for measuring the capillary reflex and blood decimal; the remainder of the book is devoted to descriptions of cases. Uric acid diseases he divides into two classes, those in which uric acid is circulating in the

blood and those in which it is precipitating locally. The cases would be more convincing if the author did not lay such full claim to so many diseases. His vision seems to be narrowed by uric acid spectacles. To everyone who has read Uric Acid as a Factor in Disease the present volume will be of great interest.

G. S. S.

The Practical Medicine Series. By GUSTAVUS P. HEAD, M.D., and CHARLES L. MIX, A.M., M.D. Volume VII. Pediatrics and Orthopedic Surgery, Modern, Isaac A. Abt, M.D., and John Ridlon, A.M., M.D. Series 1910. Chicago: The Year Book Publishers, 40 Dearborn St.

This volume is a concise summary of the new work done in the department of pediatrics and orthopedic surgery during 1910, and affords a useful bird's-eye view for the busy practitioner. One may learn what has been accomplished in recent years along new lines with which the general practitioner is not well acquainted. An index of both subjects and authors enables him to get recent information on a given topic which may specially interest him.

B. E. M.

The Diseases of Women. A Handbook for Students and Practitioners. By J. BLAND SUTTON, F.R.C.S. (Eng.), Surgeon to the Middlesex Hospital, and Senior Surgeon to the Chelsea Hospital for Women; and ARTHUR E. GILES, M.D., B.Sc. (Lond.), F.R.C.S. (Edin.), Surgeon to the Chelsea Hospital for Women and Gynecologist to the Tottenham Hospital. Sixth edition, with 123 illustrations. New York: Rebman Company, 1123 Broadway.

In describing diseases of the uterus, the authors call attention to injuries inflicted on that organ by the hands of gynecologists. Thus, in 1905, Jacob collected 141 instances of perforation of the uterus; of these twenty-three died, the majority from septic peritonitis. These statistics go to show that a minor procedure, such as the passing of the uterine sound or the dilatation of the cervix uteri before curetting, may terminate in a major disaster.

Fibrosis uteri and adenomyomatous disease of the uterus, both prominent causes of metrorrhagia, are described in separate chapters. A full description of the radical operation for hysterectomy is given. The chapters on diagnosis are excellent. There

is an absence of multiplication in the treatments recommended. The style is direct, without ambiguity. The illustrations are fairly good. It is a plain, serviceable book. J. J. C.

The Medical Record Visiting List or *Physician's Diary* for 1911. New revised edition. New York: William Wood & Company, Medical Publishers.

The Medical Record Visiting List for 1911 has just reached us. It is, if possible, better than ever, and contains a fund of information useful to the busy practitioner. Medical men in need of a list of this kind cannot do better than invest in a copy for the coming year.

The Ontario Public School Hygiene. By A. P. KNIGHT, M.A., M.D., Professor of Physiology in Queen's University. Toronto: The Copp Clark Co.

The Minister of Education for Ontario has authorized this book for use in Forms V and VI of the Public Schools of this Province and we hope it will meet with like recognition in other Provinces.

Prof. Knight for some years has promoted and taught School Hygiene, both in the Normal Schools and in the Public Schools of Kingston. His book is practical, clear and comprehensive, and we hope it will promote both the study and practice of hygiene in the schools of Canada. It is a decided advance on any previous hygiene text-book published in Canada.

Martindale & Westcott's Extra Pharmacopeia, 14th Edition, with Supplement, "Organic Analysis Chart." Pages, 1,054 +80; size 6⅝ x 4½. Price, 12s. net; Supplement, 3s. 6d. net; 15s. 6d. net, complete. London: H. K. Lewis, Publisher, 136 Gower Street.

In the Extra Pharmacopeia, medicines are viewed from a pharmaceutical and a medical aspect; references to their use, with the doses employed, are given *in précis.* Modern official drugs are still noticed and older ones are introduced, when unofficial preparations of them are in use or their preparations have undergone alteration. There is a supplementary list of drugs; also a list of "Patents," with references. Sixty-six pages in

small print are devoted to vaccines and antitoxins; eighteen pages to organotherapy. A list of mineral water stations and a list of British and Irish health resorts are given. Sixty-five pages are devoted to analytical memoranda; seventy-five pages to the Index and Posological Table. There is also a full therapeutic Index of Diseases and Symptoms and a list of poisons and antidotes.

The organic analysis chart, which is printed separately, is intended to be used for the recognition of organic chemical bodies used in therapeutics; reports are given of 319 substances.

J. J. C.

Dislocations and Joint Fractures. By FREDERIC J. COTTON, A.M., M.D., First Assistant Surgeon to the Boston City Hospital; Assistant Professor of Clinical Surgery in Tufts College Medical School, Boston. Octavo of 654 pages, 1,201 original illustrations. Philadelphia and London: W. B. Saunders Company. 1910. Cloth, $6.00 net; half morocco, $7.50 net.

The opinions expressed in this book are based upon the personal experiences of the writer, who refers to the advantages of the X-rays as an accessory method in the diagnosis of these conditions, and states that he believes that the advances of the next decade will be chiefly in the diffusion of the knowledge already gained, the adaptation to actual working conditions of that already available, and the cultivation of a greater degree of personal skill in diagnosis and also in non-operative and operative treatment. In the first place he deals with the definitions, descriptions and diagnosis of the various forms of dislocation and fracture, together with the method of using the X-rays in this connection. The treatment and the complications which may occur are then considered at considerable length. Subsequently dislocation and fracture are considered in relation to the various parts of the body which may be affected, the pathology, diagnosis and treatment being dealt with in each case. The numerous illustrations, many of which are reproductions of X-ray pictures, form a valuable addition to the text. The book is a useful compendium of the present day knowledge of the subjects dealt with, and should form a part of the library of every surgeon.

H. A. B.

Normal Histology with special reference to the Structure of the Human Body, by GEORGE A. PIERSOL, M.D., Sc.D., Professor of Anatomy in the University of Pennsylvania. Philadelphia and London: J. B. Lippincott Company.

This work has become so popular that it now has reached the Eighth Edition. The author has been most successful in recognizing the salient features of this most important subject, and does not burden the student with unnecessary lengthy descriptions of the various tissues and organs of the body.

The illustrations are many and excellent and cannot but be appreciated by student and teacher. D. K. S.

GRAPE JUICE IN THERAPEUTICS*

The majority of the profession know of the so-called Grape Cure establishments existing in Switzerland, Germany and other countries. Such establishments have of recent years become quite popular, as there is no doubt that it has been established that many forms of gastric and intestinal trouble can be cured by such treatment. That Grape Juice can be a valuable therapeutic agent, there is little doubt. There is perhaps nothing quite as refreshing to the fevered patient as Grape Juice properly administered. This is especially the case in the warm weather, when it can be served with ice. Grape Juice, properly prepared and bottled with the care as used in the laboratories of Mr. E. D. Smith, Winona, Ontario, contains undoubted medicinal qualities, being not only exceedingly refreshing and invigorating, but mildly stimulating in character. Cases are known of typhoid fever, where no medicine has been used outside of Grape Juice, with favorable results. The attention of the medical profession is called to the Grape Juice bottled by Mr. E. D. Smith, and medical practitioners can rest assured that when they prescribe this particular brand for their patients they can make no mistake. Smith's Grape Juice sells at as low a price as any other on the market, notwithstanding the fact that it is superior to, at least, many.

*Publisher's Department.

125

The Canadian Journal of Medicine and Surgery

A Journal published monthly in the interests of Medicine and Surgery

Vol. XXIX TORONTO, MARCH, 1911 No. 3

Original Contributions

OBSERVATIONS ON FRACTURES*

By Herbert P. H. Galloway, M.D.

Orthopedic Surgeon to Winnipeg General Hospital. Lecturer in Orthopedic Surgery, Manitoba Medical College.

So much has been said and written during recent years favoring the operative treatment of recent fractures that the time seems opportune to ask whether we are not in some danger of allowing certain theoretical considerations to obscure our common sense and cause us to forget the surgical experience of the past. As long as man has existed his skeleton has been subject to fractures, and the combined efforts of Nature and the art of the surgeon have proved sufficient for thousands of years for the repair of his broken bones and the restoration of their function in all ordinary cases without operation; yet of late in certain quarters we are being taught by high authority that imperfect results are almost inevitable unless the bones are freely exposed and the fragments placed in perfect apposition and fastened together by ingeniously devised steel plates and screws, wires, clamps, etc.

The general surgeon or the general practitioner who, for two or three decades has treated fractures successfully by much humbler methods, is perhaps in little danger of being led astray

*Read at the Annual Meeting of the Manitoba Medical Association at Winnipeg, May, 1910.

by this new surgical theology; but I have myself been witness of the disturbed condition of mind and disordered surgical judgment which this apparently authoritative advocacy of the operative treatment of fractures at times produces in practitioners of limited experience.

It was my privilege a few weeks ago, while in London, to visit the clinic of the distinguished surgeon, Mr. W. Arbuthnot Lane, the acknowledged leader in advocating and practising the operative treatment of recent fractures. Before offering any unfavorable criticism, the writer wishes to acknowledge in all sincerity the great indebtedness of the surgical world to Mr. Lane for the valuable contributions to our knowledge of the operative treatment of fractures which have resulted from his bold and original work in this branch of surgery. He would indeed be a phlegmatic surgeon who could stand close by and see Mr. Lane operate on a recent fracture of the tibia, without a feeling of warmest admiration for his consummate surgical skill, his deftness and precision, and his almost faultless technique. Yet, personally, my enthusiasm was dampened on one occasion by the conviction that the fracture was one upon which it was simply inexcusable to use the knife at all, and I do not hesitate to say that my opinion in this matter would have been shared by nearly all practical surgeons of wide experience. The radiograph showed that there was only a moderate degree of overlapping and displacement, and the condition revealed after exposure had been made only confirmed the opinion the writer had formed from an examination of the radiograph, that the fragments could easily have been brought into sufficiently accurate apposition without operation.

The incision to expose the fracture was not less than six inches in length, and after having with infinite pains and skill, and wholly by the use of steel instruments, without allowing his gloved fingers once to enter the wound, brought the fragments into apposition, they were fastened together by a heavy steel plate almost four inches in length, held in place by six screws. But the surgeon was evidently not quite satisfied because an insignificant fissure less than one-sixteenth of an inch wide could still be detected between the fragments at one part after the heavy steel bridge had been placed in position, and to my amaze-

ment he proceeded to correct this defect (?) by another small plate and two more screws. The soft parts were then brought together; dressings, bandages and splints applied, and the patient was returned to the ward.

I know nothing regarding the outcome of the case referred to; it was in all probability satisfactory. But I have no hesitation in saying that, personally, I would not submit to such an operation for a similar condition of my leg at the hands of any surgeon in the world; I would infinitely prefer to be treated without operation by any experienced and common-sense general practitioner. In the doubtful event of any serious degree of deformity or disability resulting under splint treatment I know that it could be rectified afterward, if necessary; but the possible consequences of the operation just described are too disastrous to be contemplated with philosophic composure when one thinks of oneself as the patient. The most deplorable feature of the whole matter, to my mind, however, was not the risk run by the particular patient, which it must be granted was not large; what I most regretted was the effect of such impressive but unsound clinical teaching on the onlookers. Gathered around the table were house surgeons, young graduates, visiting practitioners and nurses. During the progress of the operation one of these younger surgeons, and evidently a disciple of the operator, remarked to him, "I struggled for an hour and a half yesterday with a fracture of the humerus—an ordinary T-fracture into the joint, you know." An ordinary T-fracture into the elbow joint does not require operation. I would not allow any surgeon to operate on my arm or the arm of my child for an ordinary T-fracture into the joint. In less than five minutes such a fracture can be dressed in the acutely flexed position so ably advocated by Mr. Robert Jones, with a practical certainty of an almost perfect functional result, as I well know from my observation of cases in the practice of Mr. Jones, and from a fairly large personal experience.

The writer does not wish to be understood as denouncing wholesale the operative treatment of fractures. There are cases that demand operation, and where the ingenious mechanical aids so carefully worked out by Mr. Lane are of the greatest service in securing the best results, and on occasion we should

all be glad to avail ourselves of them. Fig. 1 is a radiograph of a patient seen a few months ago with Dr. Montgomery, of Deloraine. It shows complete non-union and wide separation of the fragments in a fracture of the humerus, which had occurred several months before either of us saw the patient. In such a case anything less radical than operative treatment was not to be thought of. The site of fracture was exposed freely, the broken ends pushed out of the wound, freshened, shaped to fit one another, and then securely held in apposition with one of Mr. Lane's steel plates and four screws, with a perfect result.



Ununited Fracture of Humerus.

On the other hand, Fig. 2, the radiograph of the elbow of a boy of 8 years, seen with Dr. Douglas, of Moose Jaw, shows a condition which was treated without operation, with an equally good result. As is always the case in childhood, owing to the largely cartilaginous character of the bone, the broken fragment appears much smaller in the radiograph than it really was. Viewed stereoscopically, the fragment in this elbow was seen to be so much displaced that a good result without opening the joint might well have been regarded as more than doubtful; yet, though the treatment was of the simplest character and un-

attended by pain or risk, the arm was restored to practically perfect function.

What the writer wishes to protest against is unnecessary interferenee with fractures, even by trained hospital surgeons with every facility at command for doing the best work, and against the misleading influenee which such mischievous clinical exhibitions cannot fail to have on students and practitioners of limited experience. In the nature of things, the majority of fractures must necessarily be cared for by general practitioners, and it would indeed be deplorable if the conscientious country practitioner, whose duties, Heaven knows, are already sufficiently



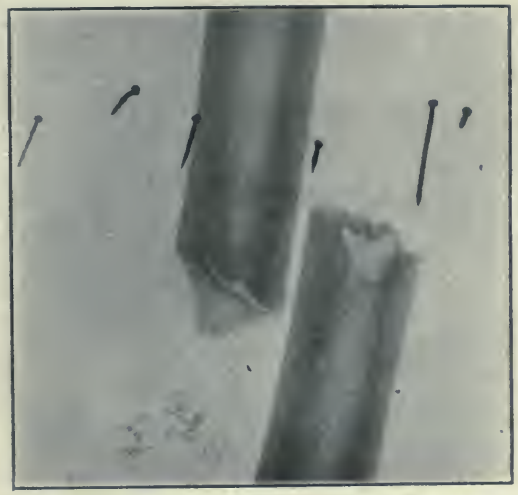
Fracture with Separation of Epiphysis of Humerus.

harrassing, be further worried by the false teaching that the routine treatment of fractures should be by operation.

I am aware that ideal results do not always follow non-operative treatment; having been engaged for years exclusively in orthopedic practice, my work naturally brings me into contact with many cases of deformity and disability resulting from malunion or non-union; but I am convinced that the more general adoption of operative treatment would certainly increase rather than lessen the percentage of imperfect results, and occa-

sionally lead to irreparable disaster. Even should deformity or imperfect function occasionally follow the more conservative methods, these things can nearly always be remedied afterwards if necessary by an operation much less serious and risky than the primary operation must ordinarily be, for the reason that it would be deliberately planned and carried out under the most favorable conditions and in sound tissues, instead of the bruised and lacerated tissues of doubtful vitality and lessened resisting power to infection which surround a recent fracture. My conviction that surgeons should operate only very exceptionally on recent fractures was greatly strengthened by the privilege I enjoyed a short time ago of spending the greater part of nearly every day for a number of weeks in constant close contact with both the hospital and private practice of Mr. Robert Jones, of Liverpool. I am not alone in thinking that Mr. Jones easily takes first place among the orthopedic surgeons of the world. In orthopedics he is a Gamaliel, at whose feet it is indeed a privilege to sit and learn. His experience in the treatment of fractures is enormous, and his results almost uniformly as good as could possibly be obtained. Yet his methods, while in many instances unique, are the essence of simplicity. A recent Colles fracture is reduced and put up complete without anesthesia in about two minutes; a malunited Colles fracture of from three weeks to several months' standing is refractured, also without anesthesia, and dressed complete within three to five minutes. One is inclined to marvel at these things before learning that, at the age of twenty-four, this surgeon published a paper on Colles fracture, based on more than a hundred cases, and that since then his experience covers thousands of cases. In a single morning last April I saw with him in his private consulting room four new cases of malunited Colles, each of which was reduced and dressed in a few minutes. In fractures of the thigh, recent and old, incredibly good results are achieved by a combination of a modified Thomas knee splint and simple gutter splints of sheet iron; these fractures can be put up in a few minutes and require a minimum of supervision afterwards. In comparison with the popular Liston long splint and weight and pulley extension, the method of treatment of thigh fractures by the Thomas splint is as much an advance in surgery as our modern express trains

are an advance over the stage coach in transportation. I have for years treated these cases without operation, and with the greatest comfort to the patient, by a plaster-of-Paris spica. Fig. 3 is a radiograph of the femur of a boy of 12 years old, seen a few months ago with Dr. Manchester, of this city. It is a case which many of the advocates of operative treatment would certainly regard as calling for plates and screws, yet the fracture was reduced without difficulty three days after it occurred, by screw traction, and was immediately put up in plaster-of-Paris,

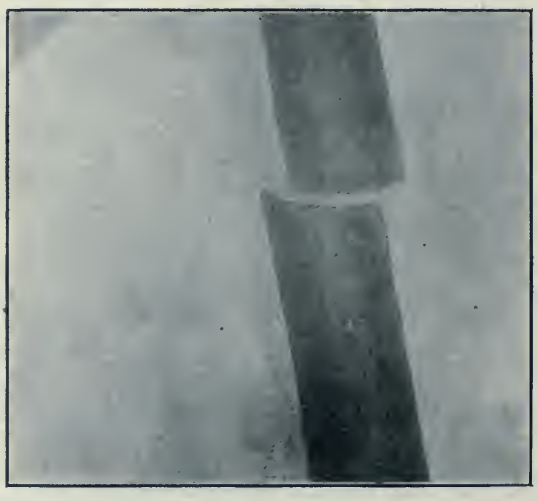


Fracture of Femur. Exposure made through splint showing nails.

with the result that recovery, without shortening and with perfect function, occurred. Fig. 4 shows the radiograph of this patient, taken through the plaster the day after the reduction. If it be objected that the apposition is not mechanically perfect, my reply is that it is at least as good as will be secured by the average operator by plates and screws, and much more nearly perfect than is necessary for a functional result as good as could be desired. Radiographs are of immense service in the diagnosis of fractures, but as a means of judging the functional result after the fracture has healed they may be totally misleading. In nearly every instance a radiograph of a healed fracture of the

upper or lower extremity, which has left the patient without conscious disability, will show that there is not perfect end-to-end apposition of the fragments. The obvious deduction, and it is one abundantly supported by the experience of practical surgeons, is that perfect end-to-end apposition is not necessary to a good functional result.

Mr. Jones seldom operates on fractures except malunited ones, yet his results are usually most satisfactory; and it is not because he is without abundant experience as an operating



Reduced Fracture of Femur. Exposure made through plaster cast.

surgeon that he refuses to use the knife on ordinary fractures. It was no uncommon thing while I was with him to see him perform between twenty and thirty operations in one day, and as his practice is exclusively orthopedic, his operations necessitate much serious bone and joint work. He has opened the knee joint for displaced semilunar cartilage and other forms of internal derangement more than 600 times, with only one case of infection, and that one occurred years ago, when some of his present precautions were not used. His technique is so exactingly careful as to make infection practically impossible. His experience in the operative treatment of malunited fractures is

very large. His avoidance of operations in nearly all recent fractures is therefore not the result of cowardice or want of surgical experience, but simply of his conviction that such interference is ordinarily unwarranted and mischievous.

Conclusions.

As usual, the truth lies between extremes; the aid of the knife in treating fractures should be welcomed when it is necessary, but it is usually unnecessary.

More or less frequent disaster will certainly follow anything approaching the routine adoption of operative methods.

Radiography is useful and often indispensable for exact diagnosis, but often misleading as a means of passing judgment on the practical results of treatment.

The general practitioner should not be disturbed by the ridiculous statement sometimes made in surgical discussions in recent years, that only the operating surgeon is competent to deal with fractures.

661 Broadway, Winnipeg.

A SKIN ERUPTION IN SIX CONSECUTIVE CASES OF POLIOMYELITIS*

By Dr. Alan G. Brown, Sick Children's Hospital.

This skin eruption which I am about to describe appeared in six consecutive cases in the H.S.C. during a period of one and a half weeks, and has followed the same course in each case. The cause and distribution and whether or not it is associated with the paralysis yet remains to be ascertained. In reviewing the different works on poliomyelitis, there appears to be no reference to such a lesion, but in looking over the New York report of 1907 of the epidemic there, I find they have tabulated, but not fully described, different varieties of skin eruptions, as follows:

Erythema, 7; macular, 8; maculo papular, 3; papular, 18; pustular, 3; urticarial, 2; sudomina, 8; herpes, 2; petechial, 2; vesicular, 6.

The form of eruption which was most common in this epidemic was papular, and it was particularly mentioned in many instances that the eruption covered the entire body. In concluding, the article says: "Perhaps this eruption may have some significance, since it is not apt to be mistaken for anything else."

The character of the rash was fairly uniform, and the distribution seems to vary little. In all cases it appears as a small papule, quite shot-like in charaeter, with a tiny inflammatory base. This may or may not got on to vesiculation. If it does, the vesicle is about the size of a pinhead, and looks not unlike a small chicken pock, containing a clear fluid. The vesiele also is quite hard, and those papules which terminate in a vesicle lose their inflammatory base. The rash may appear in all stages on the same patient; for example, in one area vesiculation may be present, while in another simply a papule; and then again, a small impalpable pigmented spot. The distribution is as yet indefinite, but in all cases they appear to be present and most abundant on the paralyzed limbs, and then again they seem to

*With the consent of Drs. Baines and Machell and assistance of Dr. Goldie, I am permitted to make this report.

be scattered, but only sparsely, over the unaffected abdomen and chest, and occasionally on an unaffected upper extremity. They do not appear to follow any definite nerve segments, nor are they in the least painful to the touch.

Case 1.—The rash was present when the child was admitted, and the disease was then of four days' duration, and as far as could be noticed there was no further development of the vesicles. The temperature never rose above 99°, and fell the fourth day; and on the 15th day after admission the lesion had entirely disappeared. It was present on the outer side of the right and left leg, and on the external part of the dorsum of both feet, but more abundant on the right side.

Left leg completely paralyzed. Right leg had slight movement in every direction.

Case 2.—This patient's illness was of two days' duration, and when admitted the rash was easily discernible, but did not appear on any fresh areas, and could not be seen on the 18th day after admission. The temperature fell to normal on the second day, and never rose above 99°, except four days later, when it went to 101°, then fell. This lesion showed a symmetrical distribution, viz., on the anterior and posterior surfaces of the right and left leg, and one or two on the dorsum of the feet; throughout, the rash was very feeble. Left leg was completely paralyzed. Right leg showed fair movement, but the reflexes were gone.

Case 3.—In this case, also, the disease had been present four days previous to admission, and at this stage presented the skin eruption, which did not show any further development. The temperature fell to normal on the third day, and never rose above 99°, but during the following weeks there was an occasional rise of temperature, attributed to intestinal disturbance. The rash showed typically and disappeared about the end of the second week after admission, being profuse over the dorsum of the right foot, tibial and calf surface. The right leg was completely paralyzed, the left leg feeble. Scattered papules were present over the trunk, while the rash also appeared on the right elbow and on the posterior surface of the forearm. Only a discrete papule existed on the posterior surface of the left arm. Power in both arms quite normal.

Case 4.—On admission had been ill five days, and the rash was present from the beginning, and faded at the end of two weeks after admission. This case ran almost a continuous temperature since admission, although never rising above 99°, with a.m. and p.m. remissions. The lesion was present only in the form of an occasional papule and vesicle on the calf and sole of the right foot. Right leg paralyzed. Left leg moved slightly, but reflexes gone.

Case 5.—Had also been ill five days previous to admission, with a rather pronounced rash, which did not appear to form in fresh places, and was entirely gone at the end of three weeks and a few days. The temperature on admission rose to 101°, but fell to normal on the 6th day, and in four days again rose to the same height, and likewise fell on about the 7th day, and from this on ran a rather irregular course. The rash was present on the anterior and posterior surfaces of both legs, chest, abdomen, and an occasional one on the upper extremities, but did not seem to be present more on one place than the other. Both upper extremities paralyzed and lower reflexes gone. Throughout, the child showed mild brain symptoms.

Case 6.—Was ill six days before admission, and showed the rash from the first, disappearing at the end of the third week, not developing any more after patient's admission to the hospital. This temperature was also very irregular, with a.m and p.m. remissions, not rising above 99°, and even up to date the temperature is not normal continuously. The rash was typical, being present more or less all over the body, papular and vesicular, more especially on the lower extremities, anterior and posterior surfaces, and on the dorsum of both feet, over the trunk and chest, and only an occasional one on the arms. Both lower extremities paralyzed, while the upper seem normal.

The lumbar punctures, smears and cultures from the serum of the vesicles have shown no uniform results, while sections through the vesicles show the latter not to be deep-seated, as one would imagine on palpating them, but on the contrary to be only superficial, i.e., between the malpighian and corneous layers of the skin; and apart from a little peri-vascular infiltration there was no other pathological change to be found.

Selected Articles

BRIGHT'S DISEASE, ITS TREATMENT

The ordinary treatment of Bright's disease, as we all know, consists in promoting elimination through the bowels and skin. Salines or stronger purgatives are given as the urgency of the case indicates. Sweating is promoted by the hot bath, the wet pack, steam, or hot air baths. If these measures are not sufficient, pilocarpine may be given hypodermically. If the blood-pressure is low, digitalis or strophanthus are of great benefit. The patient should be made to drink freely of water, to which small quantities of sodium benzoate or citrate may be added to advantage. Counter-irritation over the loins is often of benefit.

In France several eminent workers, the best known of whom was Brown-Sequard, have been studying the effects of the extracts of the kidneys. They say that this organ has an internal secretion, the origin of which is the granular substance found in certain cells. This can be given by the mouth and exerts its influence upon the body metabolism. The "modus operandi" of this extract has not been clearly explained, but the clinical results are often strikingly brilliant. In this country this granular ferment is sold under the name of Nephritin; it comes in tablet form. It is useful in nearly all classes of nephritis, but I wish to bear witness to its especial benefit in acute cases and shall report a very few from my own practice.

Case 1. Mr. James S., age 24. Acute nephritis, following typhoid fever. Urine scanty and highly colored; albumin quite abundant, many epithelial casts and some red blood corpuscles; edema of the lower lids and of the ankles. Gave ten tablets of nephritin each day. On the second day the amount of urine began to increase, the urea was above normal in amount, showing that the poisons in the system were being rapidly eliminated. At the end of a week there was no more blood in the urine and very few casts. Within a month he was entirely well and his urine was normal.

Case 2. Susie P., age 12. Post-scarlatinal nephritis. Urine

almost suppressed when we began nephritin. It soon began to flow freely, the albumin gradually diminished, and at the end of three weeks she was perfectly recovered.

Case 3. Mr. George M., age 30. Acute nephritis from exposure to cold after alcoholic debauch. Urine very scanty and muddy; edema of face and legs. Under fifteen tablets of nephritin a day, he was well in five weeks.—*New Albany Medical Herald.*

Reprint from article by Dr. William Henry, Harmon, Ill.

MAGNESIUM-PERHYDROL

Magnesium-Perhydrol is chemically pure magnesium-peroxide; it is a light white powder, tasteless and odorless, and almost insoluble in water. Supplied in two strengths: (15 per cent.), containing 15 per cent. of MgO_2 and 85 per cent. MgO; and (25 per cent.), containing 25 per cent. of MgO_2 and 75 per cent. MgO.

The therapeutic action of magnesium-perhydrol is due to the liberation of active oxygen within the system.

It is used in abnormal gastric and intestinal fermentative processes, typhoid fever, fetid eructations, vomiting, nausea, diarrhea in tuberculosis, etc.

The dose in digestive disturbances is 4 to 8 grn.; in diarrhea, 2½ to 4 grn. in keratinized gelatine capsules. Ordinarily ½ to 1 teaspoonful may be given three to four times per day.

W. Kirkpatrick describes the action of magnesium-peroxide in *typhoid fever* in which he used the preparation in doses of 9 grn. in keratincoated capsules (*Semaine medicale,* 1908, p. 270). He usually gave this dose every four hours, in severe cases every three hours, and continued it until the temperature had returned to normal. The action of the remedy was very apparent by the fact that the temperature immediately rose again as soon as the treatment was discontinued, and fell once more when it was resumed. Of 48 severe cases treated with magnesium-peroxide, Kirkpatrick observed a fatal termination in 4 cases only, *i.e.,* 8 per cent., while with other methods of treatment 33 per cent. of the patients died.

Canadian Journal of Medicine and Surgery

Editor:
J. J. Cassidy, M.D.
45 Bloor St. E., Toronto

Managing Editor:
W. A. Young, M.D., L.R.C.P., Lond.
145 College St., Toronto

Surgery:
N. A. Powell, M.D., C.M., Professor of Medical Jurisprudence, Toronto University; Senior Assistant in charge, Emergency Department, Toronto General Hospital; J. F. W. Ross, M.D., Professor of Gynecology, University of Toronto; Gynecologist, Toronto General Hospital.

Clinical Surgery:
Alex. Primrose, M.B., C.M., Edinburgh University; Associate Professor of Clinical Surgery, Toronto University; Secretary Medical Faculty, Toronto University; Surgeon Toronto General Hospital; and Herbert A. Bruce, M.D., F.R.C.S., Eng., Surgeon, Toronto General Hospital.

Orthopedic Surgery:
B. E. McKenzie, B.A., M.D., Toronto; Surgeon to the Toronto Orthopedic Hospital; ex-President of the American Orthopedic Association; and H. P. H. Galloway, M.D., Orthopedic Surgeon, Winnipeg General Hospital; Lecturer in Orthopedic Surgery, Manitoba Medical College; Member of The Medical Orthopedic Association.

Militia and Naval Medical Services and Ambulance:
J. T. Fotheringham, M.D., Lieutenant-Colonel, Army Medical Corps, Associate Professor of Medicine and Clinical Medicine, University of Toronto; Associate Collaborator Chas J. Copp, M.D., C.M., Hon. Sec. Provincial Council of Ontario, St. John Ambulance Association.

Medical Jurisprudence and Toxicology:
Arthur Jukes Johnson, M.B., M.R.C.S., Eng., Coroner for the City of Toronto; Surgeon Toronto Railway Co., Toronto; W. A. Young, M.D., L.R.C.P., Lond., Ex-President of the American Medical Editors' Association; Associate Coroner, City of Toronto.

Physiotherapy:
Chas. R. Dickson, M.D., C.M., Queen's University; M.D., University of the City of New York; Electrologist Toronto General Hospital, Hospital for Sick Children and St. Michael's Hospital.

Pharmacology and Therapeutics:
A. J. Harrington, M.D., M.R.C.S., Eng., Toronto.

Pediatrics:
Allen Baines, M.D., Toronto; Associate Professor Pediatrics, University of Toronto; Physician, Hospital for Sick Children; A. R. Gordon, M.D., Toronto; Senior Medical Assistant, Toronto General Hospital; Helen MacMurchy, M.D., Toronto.

Medicine:
J. J. Cassidy, M.D., Toronto, ex-Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; W. J. Wilson, M.D., Toronto, Physician, Toronto Western Hospital; and Dr. J. H. Elliott, ex-Medical Superintendent, Gravenhurst Sanatorium, Ont.; Associate Medicine and Clinical Medicine, University of Toronto; Senior Medical Assistant, St. Michael's Hospital.

Clinical Medicine:
Alexander McPhedran, M.D., Professor of Medicine and Clinical Medicine, Toronto University; Physician, Toronto General Hospital; Lewellys F. Barker, M.D., Professor of Medicine, Johns Hopkins University, Baltimore, Md. H. B. Anderson, M.D., Toronto; Associate Professor of Clinical Medicine, University of Toronto; Physician, St. Michael's Hospital.

Bacteriology:
J. G. Fitzgerald, M.D., Lecturer in Bacteriology, University of Toronto.

Mental and Nervous Diseases:
N. H. Beemer, M.D., Mimico Insane Asylum. Campbell Meyers, M.D., M.R.C.S., L.R.C.P. (London, Eng.), Private Hospital, Deer Park, Toronto.

Gynecology and Obstetrics:
Geo. T. McKeough, M.D., M.R.C.S., Eng., Chatham, Ont.; and C. F. Moore, M.D., Toronto.

Pathology:
W. H. Pepler, M.D., C.M., Surgeon Canadian Pacific R.R., Toronto; Junior Medical Assistant, St. Michael's Hospital; and J. J. Mackenzie, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology:
J. M. MacCallum, M.D., Toronto, Senior Assistant Eye Department, Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Nose, Throat and Ear:
Perry G. Goldsmith, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb; Senior Assistant Ear, Nose and Throat Department, Toronto General Hospital.

Dermatology:
D. King Smith, M.B., Tor., Toronto; Demonstrator in Pathology, Toronto General Hospital.

Address all Communications, Correspondence, Books, Matter regarding Advertising, and make all Cheques, Drafts and Post-Office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

Reprints supplied Authors at Cost.

Editorials

HEALTHFUL HOMES REDUCE TUBERCULOSIS AMONG THE WORKING CLASSES

Sanitarians are now recognizing the fact that tuberculosis is, to a large extent, a "house disease," that is, that a succession of cases often occur in a certain house or a block of houses. Infection may be direct from close association with "an open case" of consumption; but, in other cases, it may be indirect from exposure in an infected house. Whether the infection be direct or indirect, the chances of taking the infection are increased by overcrowding in the house. The evils of overcrowding in houses are recognized; but if legislation against overcrowding were enforced it might turn away from a city all workmen who would be unable to procure shelter for themselves and families. Hence, the tolerated anomaly observed in our growing towns and cities, where many workmen are employed—enormous palaces for the rich, little, unhealthy hovels for the poor.

Model houses for wage-earners have been put up in cities and manufacturing centres in Europe and America, but such enterprises are necessarily limited in scope. In England, Germany, France, the housing of the poor has been met to a certain extent by the aid of the Government. In Canada, the Government can scarcely be expected to assist municipalities by loans of money for the betterment of

houses, any more than for the construction of sewers or other local improvements. This should rather be the function of the municipality. If the municipality will not tackle the problem of housing the poor, there is another method advocated by Dr. Sternberg, of Washington, D.C., in a paper read at the annual meeting of the Canadian Association for the Prevention of Tuberculosis, which was held at Montreal last June. This method, called "business philanthropy," means a philanthropic enterprise, conducted upon business principles, and made to return 5 per cent. interest upon the capital invested.

That it is practical has been demonstrated in the City of Washington by the experience of a company, which Dr. Sternberg was instrumental in organizing twelve years ago. This company now has $940,000 invested in 289 houses, containing 578 apartments. The houses are of the two-flat type. Each house is of two stories, and each floor consists of an independent flat of three, four or five rooms. Each apartment has a modern water-closet, with sewer connections, and a bath, with hot and cold water. A good range, with a water-back, is placed in the kitchen. Each flat has a separate entrance from the street, a small cellar and a back yard. The back yard is divided into two parts by a high board fence, so that each family has an independent yard leading to an alley in the rear.

This type of house has been largely copied in the City of Washington, and, in the past five years, nearly 2,000 houses have been built there for rent or

sale by private builders. Dr. Sternberg thinks that improved housing has had an important effect in reducing the once high death-rate of Washington. It would be a good thing to have many such houses in the growing cities of Ontario—a benefit to the health of the workman's family, with privacy and modern conveniences, at a low rental.

J. J. C.

ALCOHOLISM A CAUSE OF DEGENERACY

A DEGENERATE is defined to be a person of a perverted mental or physical constitution. In a paper entitled "The Ancient Foundations of Heredity" (*The Canadian Medical Association Journal,* January, 1911), Dr. A. B. Macallum contends that "alcoholism is a symptom or a result, and not a cause of degeneracy."

We have known some charming fellows, of excellent business or professional attainments, who perished before their prime through devotion to whiskey. We have also known several eminent men, who lived respected to the last, but who died of alcoholic cirrhosis of the liver. According to Dr. Macallum, these men were degenerates, and their alcoholism was just a symptom or a result of their degeneracy. If they were degenerates, their associates were not aware of it. In other words, these genial alcoholics drank to excess because they liked alcohol, not because they were ignorant, or mentally defective.

In a memoir of the Eugenics laboratory (B.M.J.,

Jan. 7, '11, p. 29), the opinion is expressed that parental alcoholism does not lead to mentally defective children, but that alcoholism is probably as much the product of the mental defect in those extreme cases as the children are—the same view as the one expressed by Dr. Macallum. A very different estimate of the operative effects of alcoholism on the descendants of an alcoholist is expressed by Dr. Legrain, chief physician of the insane asylums of the Seine, France, whose recently published book on "Social Degeneracy Caused by Alcoholism," has obtained a favorable notice from the Academy of Medicine, Paris. Dr. Legrain gives, in detail, his personal observations, made upon 518 individuals, who were members of 215 families, including four generations, all of whom were descendants of alcoholists. He found 508 individuals, whose general health had been injured in the nervous system or in the mind. Signs of degeneracy were noted in 168 instances. In the 215 families he observed a lack of balance, revealing itself in nervousness, neuropathy, emotivity 63 times, mental weakness 88 times, moral insanity 32 times, dangerous impulses 13 times, or 196 cases of imperfections, great or small, of a mental character. Epilepsy was noted 52 times in the children of these alcoholists. Infantile convulsions were noted in 39 of the families, hysteria and hystero-epilepsy in 16 families. So much for mental weakness; but the proportion of insanity (in different forms) was enormous, appearing in 106 families out of the total 215 families.

According to Dr. Legrain, four chief facts characterize the ravages of alcohol in the first generation of the descendants of an alcoholist: (1) Mental and physical degeneration; (2) a tendency to drink alcohol; (3) a tendency to convulsions; (4) tuberculosis. In the second generation, the pathological conditions observed were similar to those seen in the first generation, only they were more intense in character and extended to a greater number of units. The observations made on the second generation applied to 98 families having 294 pathological units. In 54 families Dr. Legrain found mental debility, imbecility and idiocy; in 23 families he found moral insanity. In the third generation the alcoholic family becomes extinct through the effects of imbecility and idiocy. Thus, in 7 families, comprising 17 children, this author observed: Moral insanity, 2 cases; hysteria, 2 cases; epilepsy, 2 cases; infantile convulsions, 4 cases; meningitis, 1 case; debility, scrofula, 3 cases.

In the fourth generation only 17 children remained of the 814 primitive units. The extinction of these families by alcohol was due to a large mortality which was the consequence of physical degeneracy. The infantile mortality in the alcoholized families was ascribed to: Known premature births, 37 cases; known still-births, 16 cases; precocious infantile mortality, 121 cases; a total of 174 cases.

This statistical picture of the descendants of alcoholists, going from bad to worse, till each *stirps* is about to disappear, illustrates alcoholism as a cause of degeneracy. Alcoholism may be also a symptom

of degeneracy, a tendency to drink to excess being noted in the history of the first generation of the descendants of alcoholists by Dr. Legrain. He teaches, however, that alcoholism is the cause of degeneracy in the descendants of alcoholists.

J. J. C.

TO PREVENT PHOSPHORNECROSIS IN CANADA

IT HAS long been known that a chronic form of poisoning by phosphorus results from the effects of the vapor of phosphorus upon persons engaged in the manufacture of phosphorus or lucifer matches. It has been remarked that such persons have suffered from necrosis of the jaws, caries of the teeth, and abscesses. There has been also great irritation of the respiratory organs, and bronchitis has frequently shown itself among them. This disease is known in England as "Phossy Jaw." About 90 per cent. of the match-making business in Canada is done by the E. B. Eddy Company, of Hull, P.Q. When that company began operations, some thirty years ago, their manufacturing processes, which were altogether done by hand, frequently resulted in the production of acute dental caries, with swollen gums, among the girl operatives. Obeying instructions given by the Provincial Board of Health of Quebec, in 1888, the E. B. Eddy Company appointed a dentist to examine the teeth of their operatives every month, and to send any of them who were found suffering from phosphorus poisoning to a physician. Every

room in the factory was supplied with a large quantity of fresh air, while the foul air and any emanations caused by the manufacturing processes were extracted. The mixing-room was isolated and ventilated. Wash basins, with a plentiful supply of water, were placed at convenient places about the premises. A separate cupboard was allotted to each operative for storing working clothes. These reforms exercised a notable effect in preventing phosphorus poisoning; but the employment of Diamond Match Machines, which did away with hand-work in match-making, accomplished still more in that direction. The Diamond Match Machine automatically cuts the wood, applies the chemical paste, dries it, and places the finished matches in boxes. Thus the danger of phosphorus poisoning in the E. B. Eddy factory has been reduced by 80 per cent., as compared with the old hand method of manufacture, which is still employed in a few small concerns in the Province of Quebec.

With the intention of completely eliminating all danger of phosphorus poisoning in the match-making industry, a Bill (No. 10) has been introduced into the House of Commons of Canada by the Hon. Mackenzie King, Minister of Labor. The effect of this Bill will be to prohibit the manufacture or importation of matches made with white phosphorus.

In France, a chemical preparation, called the sesquisulphide of phosphorus, has been substituted for white phosphorus in match-making. From a report made by Dr. Courtois-Suffit, Medical Inspec-

tor of the factories at Pantin-Aubervilliers, it would appear that, since the sesquisulphide of phosphorus has been substituted for white phosphorus, the operatives in the French match factories have been quite free from phosphorus poisoning. Incidentally, he reports that there are no complaints from the public as to the quality of the matches now made in France.

The passing of Bill 10 would probably result in the substitution of sesquisulphide of phosphorus for white phosphorus in the manufacture of matches in Canada.

A similar Act has now become law, and is in force, in Great Britain. The introduction of Bill 10 into the Parliament of Canada is made at the suggestion of the Imperial authorities, who have carefully investigated the whole matter.

J. J. C.

THE PROPOSED AMENDMENT TO THE ONTARIO MEDICAL ACT

For the information of our readers, we are publishing *in extenso* on pages 156 to 157 of this issue the Bill to amend the Ontario Medical Act, as proposed by the University of Toronto, and which Bill will doubtless come up at the present session of the Ontario Legislature.

It will be seen that the University of Toronto desires to have the necessary power conferred, whereby it will be able to grant the license to prac-

tise Medicine, Surgery and Midwifery in the Province of Ontario without the students having to submit, as in the past, to examination by the Ontario College of Physicians and Surgeons. By this Act, the Medical Council will become a dead-letter, its only duty then being the registration of students when they present the necessary credentials from the University authorities.

As our readers well know, this journal took occasion last year, and we think rightly, to severely criticize the Medical Council for their business tactics, and, though we do not propose to again discuss that subject, we state without fear or favor that, in speaking out as we did, we have every reason to think that, with very few exceptions, we had the entire medical profession of the Province behind us, and that we performed a service of no mean order. We take this opportunity of stating again that the Ontario College of Physicians and Surgeons has in past years done splendid work for the profession. We consider that they can still do so, and doubtless will, with the new blood infused into their veins a few weeks ago, by protecting our interests as medical practitioners and so ordering the standard of medical education that our graduates in Medicine will be thoroughly educated in every branch before being allowed to appeal to the public for their support.

We have taken care, before speaking editorially on this subject, to seek the opinions as to the proposed Bill of some leaders in our profession, and, with hardly a discordant voice, the feeling seems to

be that the Bill is a mistake and should be promptly shelved.

It is held by the supporters of the proposed amendment that the Medical Council, as a body, is unnecessary, and that the dual examinations mean needless expense to, and work on the part of, the student. Some University men go as far as to say that the examinations, as set by the Council, are not sufficiently practical, and that any student attending Night School could pass them. The University claim, too, that it is their desire, if allowed, to turn out clinicians, and that, instead of the dual final examination, the student should have to spend that much additional time at the bedside. That is all very well, but is it not true that the Medical Council have had in the past three or four years to pluck not less than from two to three hundred final students from the University of Toronto because of inability to pass their orals? Can the report be correct that more than one such student, on being asked in his oral Council examination a year or so ago the dose of perchloride of mercury, gave as his answer, "Two grains every four hours"? Surely this would be a Gatling gun method of introducing earth's superfluous people to St. Peter, and we might long for the more restful method of crossing the Styx, as advocated by Dr. William Osler.

The Medical Council is fulfilling its purpose in standing guard and preventing such students from being foisted on the public. What has the University of Toronto to say about the Council's tremendous

number of "plucks"? Did not Dean Clarke deplore this in his report to the Board of Governors a year ago, and how can that report tally with his report of 1910, recently published?

We are justly proud of our University as an Institution of Learning, and of Dean Clarke we may truthfully say, To know him is to both respect and admire him. But our discussion of this Amendment Bill is a subject that reaches farther than University policy, broad as it may be; and it is time that we were forging forward rather than going backward to easier pathways for our students' feet to tread.

The University authorities claim that the average student should not have to pay out so much in fees, and that it is unreasonable that he should have to grind for weeks in order to pass the Council examination when the papers set by their own Examiners are more than sufficient to test the student's knowledge of any particular subject. The University takes the stand, also, that, whether the Council examinations are abolished or not, they cannot raise the standard any higher, as the people would not stand for it. We would like to ask the question, why cannot the poor students be culled out earlier in their course of study, and by that means materially reduce the recent sixty and sixty-five per cent. of "plucks" in the final year? If the University could have shown a better record in this connection during the past few years there would undoubtedly be less opposition to the proposed Act; but thus far they "Have been weighed in the balance and found wanting."

It will be noticed that the proposed Bill contains a retroactive clause enabling all Graduates of the University of Toronto who have failed at the Council for the past five years to demand registration. Is this clause inserted to try and overcome the difficulty regarding the list of students plucked by the Council since the date of amalgamation? If not, what does its verbiage, according to the latest "Higher Critics," mean?

Dean Clarke now complains that the University of Toronto is hampered by the Council as it now stands, and that, until the proposed Bill is passed, they cannot give their students the benefit of what they consider to be a proper course of Medical Education. Why? The Medical Council don't interfere with the University except in so far as demanding that the students, before passing, shall be properly equipped for the practical side of their life's work.

We feel strongly that the Council has still a right to exist, and continue to see to it that all desiring to earn a livelihood through the practise of Medicine must have the necessary knowledge and ability to heal the sick before being allowed to add the letters "M. D." to their names.

It is claimed by some favoring the University that the Ontario College of Physicians and Surgeons should be placed on a par with the Board of Medical Registration in England; but it must be remembered that the latter Board hold examinations in Medicine, Therapeutics, Surgery, Pathology, Obstetrics and Gynecology, and, in addition, have the privilege of

appointing assessors whose duty it is to see that all examinations are properly conducted. This, under the proposed Act, will not be the case with the Medical Council of Ontario, who, if by any chance it were to become law, would be but a figure-head pure and simple.

How does it come about, may we ask, that quite frequently students rejected by the Council in their matriculation examination are promptly accepted if they write for their "matric." in the University?

Why cannot the Council and the University get together? The Council are willing to forego, we learn, the primary examination, and accept the primary standard of the University. They, however, rightly insist on standing to their guns as far as the intermediate and final examinations are concerned. Now, would it not be wise if the two bodies would agree to do away with, say, the dual examination on final subjects, and consent to the final examination at the end of five years being held by a number of Examiners (who are teachers in their own subjects) chosen from the University of Toronto, Queen's University, the Western University and the Council itself? This would relieve the student of some unnecessary work and expense, and yet would give the Council an opportunity of seeing that no applicant for a license "slips" through without a proper workable knowledge of every subject.

Let the system of Medical Education adopted in Ontario be a wise combination of the Didactic and Clinical, affording the students an opportunity of

listening to carefully prepared and as carefully delivered lectures from teachers of admitted ability, at the same time giving them lots of hospital work, so that, when they assume the solemn responsibility of caring for the sick, they will not only quickly recognize the condition present, but be able to apply the remedy.

The proposed Bill is wrong.

It is an unfair discrimination in favor of the University of Toronto, and most inimical to the interests of both Queen's and the Western universities.

It looks to many like an attempted "scoop" on the part of "the powers that be" in V.A.R.S.I.T.Y.

This Bill, if passed, will, we feel, place Medical Teaching in Canada where it was many years ago, and will not tend to the best interests of our Profession.

We trust the Bill will be killed in committee.

W. A. Y.

THE ACADEMY OF MEDICINE, TORONTO

The Academy of Medicine was honored on February 7th with the presence of Dr. Harvey Cushing, Associate Professor of Surgery, Johns Hopkins University, Baltimore. Dr. Cushing was exceedingly kind in coming to Toronto, and favored a large audience with a splendid address on "Brain Tumors, and Their Surgical Treatment" with lantern slide demonstration. Dr. Cushing's address was undoubtedly one of the finest delivered at any stated meeting

this winter, and the Council of the Academy are to be congratulated on securing the presence of so distinguished a Surgeon. The attendance on February 7th included the officers of the Ontario Medical Association, which meets in May next at Niagara Falls, Ontario.

FURTHER ADDITIONS TO OUR STAFF

It is indeed a privilege to be able to announce to our readers the names of two members of the profession who have consented to join our forces.

The names are those of Dr. J. F. W. Ross, Professor of Gynecology, University of Toronto, who will identify himself with our Department of Surgery, and Dr. J. T. Fotheringham, who will assume charge of our new Department of "Militia and Naval Medical Services and Ambulance." We do not need to use any mere words of introduction to our readers, as both Dr. Ross and Dr. Fotheringham are well known throughout our land for what they have achieved and for the dignity and high ideals for which they have ever stood as adamant in the ranks of our profession.

—"know that Breed and Blood
Dictate the limits of Man's Brotherhood
And bound each fold." W. A. Y.

ASSOCIATE EDITOR IN OUR DEPARTMENT "MILITIA AND NAVAL MEDICAL SERVICES AND AMBULANCE"

DR. FOTHERINGHAM will associate with himself in his department Dr. Chas. J. Copp, of Toronto, who is Honorary Secretary of the Provincial Council of Ontario, the St. John Ambulance Association. Dr. Copp has for years done hard and consistent work in connection with this Association, and was not long ago decorated by His Majesty, receiving the Order of "Esquire" of the Order of The Hospital of St. John and Jerusalem in England.

News of the Month

BILL—AN ACT TO AMEND "THE ONTARIO MEDICAL ACT"

His Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

(1.) So long as the University of Victoria College and the University of Trinity College respectively remain federated with the University of Toronto, the Member of the Council of the College of Physicians and Surgeons of Ontario to be chosen by each of the two first mentioned Universities, as provided by Section 6 (1) of "The Ontario Medical Act," shall be chosen by and shall be a representative of the University of Toronto, and as the last named University by its Medical Faculty performs the medical teaching work previously performed by the Toronto School of Medicine and Trinity Medical School respectively, the Member of said Council to be chosen by each of said Schools as provided by said Section 6 (1) shall be chosen by and shall be a representative of the University of Toronto.

(2.) Every person who has heretofore obtained or may hereafter obtain from the University of Toronto the Degree of Bachelor of Medicine (M.B.) or Doctor of Medicine (M.D.) may within five years from the date of obtaining such degree present to the Registrar of the said Council the diploma or other proper evidence of the granting of such degree and that he is the holder thereof, and may apply to have his name entered on the book or register referred to in Section 21 of said Act, and thereupon the Registrar shall, on payment of a registration fee to be fixed by the Council and approved by the Lieutenant-Governor in Council, enter his name on the said book or register as a person deemed to be qualified and licensed to practise medicine, surgery and midwifery in the Province of Ontario, and the provisions of said Act and of the rules and regulations of said Council respecting the admission and enrolment of students, their courses of study or medical education, and the matriculation, preliminary, intermediate, final or other examinations, shall not apply to such applicant, but after registration as aforesaid the provisions of

said Act applicable to persons whose names are inscribed on said book or register shall apply to him in the same manner and to the same extent as to such persons.

(3.) The provisions of Section 20 of said Act shall not apply to the University of Toronto.

(4.) Any University, College or body in the Province of Ontario now or hereafter by law authorized to grant Degrees in medicine or surgery, and which maintains a medical faculty and grants such degrees after a course of education, medical study and examinations therein which are claimed by it to be of a standard equal to the standard maintained by the University of Toronto for similar degrees, may apply to the Council of the College of Physicians and Surgeons of Ontario for a declaration that its said standard is equal to the standard maintained by said University. Should the said Council make such declaration then Sections 2 and 3 of this Act shall apply to such University, College or Body and to the persons who obtain such degrees therefrom. Should said Council refuse to make such declaration there shall be an appeal to the Lieutenant-Governor in Council from such refusal, who may make or refuse such declaration, and if such declaration be made on said appeal said Sections 2 and 3 shall apply as if such declaration had been made by said Council.

THE RESIGNATION OF DR. J. N. E. BROWN FROM TORONTO GENERAL HOSPITAL

It was with considerable surprise that the profession learned early in February that Dr. J. N. E. Brown, who for five and a half years has occupied the position of Medical Superintendent of Toronto General Hospital, had resigned. The resignation of Dr. Brown is a matter of extreme regret to the profession, as he has filled his position to the utmost satisfaction of all. Dr. Brown has managed Toronto General Hospital with the greatest efficiency and has shown his ability to conduct a large institution as it should be conducted, and yet with every attention to economy. It is understood that Dr. Brown applied for an increase in his salary, but that the Board of Governors did not see their way to grant the request. We trust that Mr. J. W. Flavelle and his

associates will yet decide to do what seems but right, in view of Dr. Brown's splendid record. It is understood that, if his resignation is finally accepted, Dr. Brown will visit some of the large hospitals in the Old Country during the coming summer with a view to studying the methods of medical organization, hospital construction and administration generally. He will return for the conference at New York next autumn of the American Hospital Association, of which he is Secretary. It is also understood that he intends retaining his secretaryship of the Canadian Hospital Association.

Dr. J. N. E. Brown graduated from the University of Toronto in 1892, Silver Medallist. He served the following year as house surgeon in the T. G. H. In beginning practice in Toronto he served on the staff of St. Michael's Hospital, and during this time he acted as secretary of various Medical Societies.

In 1898 he was invited by the late Hon. Jas. Sutherland to join the first Government party going into the Yukon. During the time he remained there he filled the offices of Territorial Secretary and Medical Health Officer.

In July, 1905, Dr. Brown was appointed Supt. of the T. G. H., and during his administration has actively engaged in reorganizing the Institution. He introduced a modern cost accounting system; has extended the laboratory work, equipping one at his own expense. He also established Weekly Hospital Clinics for post-graduates. In connection with the new T. G. H. he visited the large cities of Great Britain and America, collecting information respecting up-to-date hospital construction.

Dr. Brown initiated the formation of the Canadian Hospital Association and the Ex-House Officers' Association. He is now Secretary of the American Hospital Association and Corresponding Secretary of the British Hospital Association.

Dr. Brown has contributed various articles to hospital literature on Hospital Planning, Construction, Organization, and Management, the most important of which is appearing shortly in a Hospital Handbook by W. B. Saunders Co., of Philadelphia.

Dr. J. N. E. Brown succeeded Dr. Charles O'Reilly in his present position five and a half years ago. He came to Toronto direct from Dawson City, where for six years or more he was



Territorial Secretary of the Yukon under the Federal Government. He was also Medical Health Officer to the Territory.

We take this opportunity of expressing to Dr. Brown our sincere regret on his leaving Toronto General Hospital, and trust he will ere long settle down in Toronto where he may depend upon the respect of the entire medical profession.

TENTATIVE PROGRAMME OF THE CANADIAN HOSPITAL ASSOCIATION

The next meeting of the Canadian Hospital Association will be held at the Clifton House, Niagara Falls, on the 23rd and 24th of May. During the same week, it is expected that the Association of Superintendents of Training Schools for Nurses and the Ontario Graduate Nurses' Association will also meet.

The following is the preliminary programme:

Dr. Charles Hastings, Medical Health Officer, Toronto, read a paper on "The Relation of the Medical Health Officer to Hospitals."

Dr. N. H. Beemer, Superintendent of the Hospital for Insane, Mimico, on "The Care of Alcoholics."

Dr. W. J. Dobbie, Physician in Chief, Weston Sanitarium, on "Prevention of Fire."

Dr. Gibson, of Belleville, "The Organization of the Medical Staff in the Smaller Hospitals."

Mr. Clarence Williams, Boston, on "The Heating and Ventilation of Smaller Hospitals."

Dr. Bruce Smith, on "A Word to Trustees of Hospitals."

Miss Lillian Uren, St. Catharines, "An Exhibit of Useful Devices for Hospital Work."

Mr. H. E. Webster, Royal Victoria Hospital, Montreal, on "Important Points in the Construction of Smaller Hospitals."

Miss McLennan, of Barrie. (Title to come.)

Miss B. Miller, St. Thomas. (Title to come.)

Dr. J. S. Hart, Toronto, "What the Average Medical Man Expects From the Hospital."

Miss Conroy, Superintendent of St. Joseph Hospital, Glace Bay, N.S., "The Duty of the Hospital to the Pupil Nurse."

Miss Dela Mater, Superintendent Nicholl's Hospital, Peterboro', "Some Impressions of New York Hospitals."

Dr. Kendall, Physician-in-Chief, Muskoka Sanitarium, Gravenhurst, "Some Observations on Sanitoria of the Old Country."

Dr. Wayne Smith, Superintendent of the Washington University Hospital, St. Louis, Mo. (Title to come.)

Dr. Fredk. Washburn, Superintendent Massachusetts General Hospital. (Title to come.)

Dr. Young, Kingston, Assistant at Rockwood Hospital for Insane, Kingston. (Title to come.)

THE GODERICH MEDICAL ASSOCIATION

At a meeting of the Goderich Medical Society, January 12th, 1911, the proposed bill to amend the Medical Act, prepared by Mr. Lash, which is to come up during the coming session of the Ontario Legislature, was discussed, and the following conclusions reached:

Sec. 1. In favor of doing away with the representation in the Council of the Colleges and Schools not actively engaged in teaching Medicine, but opposed to that representation being given to the University of Toronto, as it is already represented, and this would give it an undue representation and influence.

Sec. 2. In favor of doing away with the dual examinations, but opposed to the taking from the Council the power to set the standard of education and training necessary to enable a candidate's name to be placed upon the Register of the College of Physicians and Surgeons. This power is under the control of the profession in other Provinces, in the American States, and in Britain. Other professions in this Province retain that power, and to take it away from the Medical Council would be to destroy its usefulness, to make the profession retrograde and bring it to the position it occupied before the Council was brought into existence.

THE CHIEF MEDICAL INSPECTORSHIP OF TORONTO PUBLIC SCHOOLS

Dr. W. E. Struthers, of Toronto, was last month appointed Chief Medical Inspector of our Public Schools at a salary of $2,500. Other applicants for the position were Drs. W. F. Bryans, George Elliott and Helen MacMurchy. The subject of medical inspection of schools is a most important one, and we trust, as we stated in a recent editorial, that the same will be placed under the Local Board of Health, where it belongs.

HOMEWOOD SANITARIUM TO BE REBUILT

The new buildings at the Homewood Sanitarium will cost $120,000. The burned buildings will be completely removed from their present site, and the new buildings will be erected on the hill just back of it. One of these will be a building for nervous or solitary cases, another will be a large building containing the central dining room and kitchen for the whole institution, while still another one will be erected on the bungalow style for isolated cases.

THE NEW ONTARIO PROVINCIAL BOARD OF HEALTH

A new Board of Health was recently appointed by an Order in Council of the Ontario Government with Dr. Adam H. Wright, of Toronto, as Chairman. His associates are Dr. David B. Bentley, of Sarnia; Dr. George Clinton, of Belleville; Dr. W. H. Howey, of Sudbury; Dr. P. J. Maloney, of Cornwall, and Dr. J. W. S. McCullough who was re-appointed Secretary and Chief Health Officer of the Province.

This Board succeeds the one appointed by the Whitney Government of 1906, of which Dr. Chas. Sheard, of Toronto, was made Chairman, and his associates were Dr. M. T. Beeman, of Newburgh; Dr. W. R. Hall, of Chatham; Dr. Coughlin, of Peterborough; Dr. Robinson, of Guelph; Dr. J. W. S. McCullough, and Dr. C. A. Hodgetts, Secretary. Since that time Dr. Coughlin has been appointed head of the Institute for the Deaf and

Dumb at Belleville; Dr. Robinson has been appointed to the Hospital for the Insane at London, and Dr. Hodgetts head of the Department of Public Health on the Conservation Commission.

Public Health Exhibit.—The Provincial Board of Health of the Province of Ontario will hold a Public Health Exhibit in connection with the Canadian National Fair, held annually in the City of Toronto, beginning about the end of August. In addition to the exhibit there will be daily fifteen-minute lectures with lantern demonstrations upon various subjects relating to Public Health and Prevention of Disease. Firms desiring to contribute are advised to communicate with the undersigned at the earliest possible date, as space is limited.—John W. S. McCullough, M.D., Chief Health Officer of Ontario, Parliament Buildings, Toronto, Canada.

TORONTO'S M. H. O. AND THE FLY

Dr. Hastings, Health Inspector,
Gives sometimes a little lecture
"On the House Fly"—short and pithy,
Then we catch it—and write this ditty.

Little fly, your life is over;
Fold your wings, your bouquet's clover.
"God made me," said the little fly,
"Charley says that I must die,
And I want to know just why.

"I'm a jolly little fellow,
Always singing out a 'Hello,'
Keeping folks awake, you know,
When the sermon's long and slow;
I'm a pilgrim here below.

"Going in to see the neighbors,
Sampling good things, doing favors.
My only rival is the cat
In carrying germs from This to That."

—"Microbe."

The Physician's Library

The Ship Surgeon's Handbook. By A. Vavasour Elder, M.R. C.S., L.R.C.P.; Surgeon White Star Line; late Surgeon Orient Steam Navigation Company, etc. Second edition. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden. 1911. All rights reserved.

It is but four years since the first edition of Dr. Elder's book was issued to the profession, and it is, to say the least of it, most complimentary to the author that a second edition should be found necessary in so short a space of time. The volume is, of course, of immediate interest to ship surgeons, though it contains a good deal of interest to the average medical practitioner as well. Among the contents of the book we find discussed such subjects as "The Status of the Ship Surgeon, and His Duties on Board Ship," "Fees at Sea," "Hospital Cabins," "Medical Logs," "Ships as Convalescent Institutions."

The book is an inexpensive one, and is well worth the price charged by the publishers. W. A. Y.

Hemoglobinuria. By Ambrose E. L. Charpentier. Bailliere, Tindall & Cox, London. 1910.

In this book of 92 small pages the author discusses and describes the various forms of hemoglobinuria, and presents four cases of the paroxysmal variety which he had under his care. He does not bring forth any theories of his own, but merely tells of the work which has been done by other investigators, and the conclusions that they draw thereupon.

Most of the book is devoted to paroxysmal hemoglobinuria, describing its etiology, symptoms and pathology. In summing up their conclusions, the following appear to be proven: (1) That a pathological substance is present in the serum of paroxysmal hemoglobinuries, which can dissolve the red corpuscles of the affected individual or normal individuals, under suitable temperature conditions, in much the same way that hemolysis occurs in the controls of a Wassermann test. (2) This

hemolytic substance consists of two parts—an intermediary body (amboceptor) and an alexin (complement). (3) These must be brought into contact with blood corpuscles (antigen) at a low temperature, and then raised to body heat, or hemolysis will not occur. In this way is explained the part that exposure plays in this disease. (4) The nature of the toxin is uncertain. It may be bacterial or metabolic in origin.

The statement that non-syphilitic hemoglobinuric patients give a positive Wassermann reaction should certainly not prove true if proper controls are used.

The bibliography is very extensive, and the book will prove instructive to anyone interested in serum diagnosis or hemoglobinuria. G. S. S.

Surgery of Childhood, Including Orthopedic Surgery. By Dr. Forest Willard, A.M., M.D., Ph.D., Professor of Orthopedic Surgery, University of Pennsylvania, Philadelphia. 800 pages, with 712 illustrations. J. B. Lippincott Company, Philadelphia, publishers.

The fact of the rapid development of the organism, and the marked changes in the individual incident upon growth, during the first years of life, seems to be sufficient warrant for a separate treatise upon the Surgery of Childhood. Of the making of books, upon general surgery, there is no end, and yet there is an infinite number of things, considered small because they apply to children, to be found in this volume, for which one looks in vain in the general work on surgery.

No doubt many influences are at work during the first decade which tend to make the diagnosis, prognosis, and even the treatment, different in the child than in the adult. To prevent the practitioner overlooking many developmental defects until too late to remedy them, and to encourage the early recognition and treatment of surgical diseases peculiar to childhood, seems to be the aim of the author. The arrangement of the book is most systematic, and the detail, in a work of its volume, very minute. Scarcely a subject that one can think of has been overlooked. It thus becomes to the general practitioner a reference book of great value, and while, from an orthopedic standpoint, there

may be some features wanting, it yet is certainly sufficiently wide-reaching in its orthopedic portion to meet the needs of all except possibly those who are specialists along this line.

The illustrations are abundant and telling, and the Roentgen pictures clear and accurate. The mechanical part of the work is up to the usual high standard of the firm under whose name it is published, the paper, printing and binding being excellent.

Altogether it is a very commendable book, and should appeal not only to surgeons, but to all practitioners who have to do with the treatment of children, and who of us do not?

C. L. S.

Golden Rules for Diseases of Infants and Children. By GEORGE CARPENTER, M.D. "Golden Rule" Series No. XI. Fourth edition. Revised and partly rewritten by E. BELLINGHAM SMITH, M.D., B.S., Assistant Physician to the Queen's Hospital for Children. Bristol: John Wright & Sons, Limited. London: Simpkin, Marshall, Hamilton, Kent & Co., Limited.

This little book is one of those vest-pocket editions with which the publishers have favored the profession for some years past. Unfortunately, the author died before the proofs were revised, necessitating Mr. Eric B. Smith completing the manuscript. The little work is a very useful reference book on diseases of infants and children, and indeed is a "*multum in parvo.*"

W. A. Y.

Heart Disease, Blood Pressure, and the Nauheim-Schott Treatment. By LOUIS FANGERES BISHOP, A.M., M.D. Third Edition. New York: E. B. Treat & Company.

This is a treatise, the result of clinical work, upon a subject which the author well considers from a mechanical and laboratory point of view. Very scientific, very practical, simple, yet elegantly written, it is of value to every practitioner and student of medicine.

Clearly and concisely is the management of primary low and high-pressure conditions considered, as well as secondary low and high-pressure conditions, and suggestions are offered for their treatment.

Part 2 deals with the Nauheim-Schott treatment, giving a

description and method of carrying it out. The text really opens up a new field of thought to the reader, which will enable him to the more intelligently deal with heart disease.

W. S. V.

Sprains and Allied Injuries of Joints. By R. H. Anglin Whitelocke, F.R.C.S., Honorary Surgeon to the Radcliffe Infirmary and County Hospital at Oxford. Illustrated; 228 pages. 1909. $2.25. London: Oxford Medical Publications. Toronto: D. T. McAinsh & Co.

The subject of sprains and injuries in the neighborhood of joints, whether they be fractures or dislocations, is one to which too little attention is paid, and the result of which is frequently a disability which continues throughout life. It is important to have a better understanding of these common injuries if the larger experience of men working in metropolitan cities, where there is a large amount of shipping and manufacturing done, resulting in the production of such lesions, can throw added light upon these comparatively ill-understood conditions. Dr. Whitelocke has had an extensive experience, and writes with lucidity.

The book is verbose, and could have been reduced within much smaller limits. The classification is more minute and detailed than its clinical importance warrants, and an undue importance is given to certain features of treatment. Nevertheless, the book is a mine of information in regard to these comparatively obscure conditions. The treatment recommended in the main is such as has resulted from the observation of many years in metropolitan hospitals. The reviewer cannot, however, refrain from commenting adversely upon the frequency with which bandaging and pressure are advocated, holding to the opinion that when results are summed up it might almost be said that more injury is done than good accomplished by the use of bandages. The frequency with which they are used for almost all conditions, without being able to assign an intelligent reason for the purpose which they are intended to serve, ought to strike one forcibly. The end result, after several weeks of bandaging, as is frequently recommended by the author, is not only atrophied muscles of the part, but vessels that have learned

to depend upon the external support, and which therefore dilate and cause effusion or edema to continue for a much longer time than would otherwise have been the case.

The work of the publishers is splendidly done. The illustrations are quite in harmony with the great advance that has occurred, permitting good work in the way of illustration. The excellent index enables one to use the book as a book of reference, and as such it should be found upon the shelf of every physician or surgeon who wishes to keep himself abreast of the latest information upon such an important topic.

B. E. M.

W. B. Saunders Company have just issued a three-volume work on "Practical Treatment," written by international authorities, and edited by those able clinicians, Dr. John H. Musser and Dr. A. O. J. Kelly, both of the University of Pennsylvania.

In looking over the list of contributors, we can come to but one conclusion, namely, that this work will undoubtedly take rank as the very best on treatment extant. The names of the authors carry with them the positive assurance of thoroughness. Indeed, each chapter is a complete monograph, presenting the most recent therapeutic measures in a really practical way.

As the general practitioner is required to know certain therapeutic measures more or less of a surgical nature, leading surgeons have been selected to present such subjects. This is an important feature, and, to our knowledge, not included in any similar work.

In every case the men have been most aptly chosen for their respective tasks, and under the wise editorship of Drs. Musser and Kelly there has been produced a work on treatment that will remain for many years the last word—a source of practical information, easily obtained and readily digested.

The work will sell for $6.00 per volume, in sets only.

Medical Supervision in Schools. By Edward Millar Steven, M.B., Ch.M. (Edin.). London: Bailliere, Tindall & Cox. 5s.

In the year 1909, Dr. Steven was made Royal Commissioner by the Government of South Australia to report on the above subject. He visited Great Britain, Canada, the United States,

Germany and Switzerland, prepared and presented the report to his Government, and, at the urgent request of a number of medical and educational authorities, availed himself of the opportunity to publish the large amount of information he had gathered in the form of this book, which is, indeed, well worthy of publication.

By far the most useful and important part of the book is that dealing with the methods and results in Great Britain. A separate chapter is given to London, to Bradford, and to the Cambridge Dental Institute. Edinburgh, Glasgow, Govan, Fifeshire and Dunfermline are dealt with in the same way. There are chapters on New York and Boston; there are eight chapters on Continental Systems, and the one chapter on Canada is concerned with Toronto alone. We regret that Dr. Steven did not visit Montreal. There is necessarily a certain amount of repetition in the book, and while the information and descriptions are valuable, the criticism is sometimes not quite so satisfactory. Still, it will be agreed by all that the book will be welcome and helpful to the large number of places and people now wishing to establish or to improve medical supervision in the schools.

The chapter on Toronto is dramatic. Dr. Steven, as far as we can gather, seems to have seen no one but Dr. Charles Sheard, who favored him with his views at some length upon bacteriology in general, and made many statements which startled Dr. Steven, as they have startled others.

In conclusion, we cordially commend this book, and when Dr. Steven next visits Toronto, we trust that he may be able to remain long enough to visit the schools and give the medical profession the pleasure of seeing him. H. MACM.

Accidents in Their Medico-Legal Aspect. By Leading Medical and Surgical Authorities. Edited by DOUGLAS KNOCKER, Barrister-at-Law. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden. Butterworth & Co., 11 and 12 Bell Yard, Temple Bar. 1910. All rights reserved.

This is perhaps the most important, and certainly the most voluminous, work that has reached our office dealing with the subject of "Accidents in Their Medico-Legal Aspect." The

volume is one of nearly twelve hundred pages, and we take the liberty of heartily congratulating not only the author, but the publishers, upon the completion of a work which, we feel, will receive a hearty reception. A book of this character is of interest to not only the ordinary general practitioner, but of course more particularly to those directly connected with accident insurance companies. The subject of Accident Insurance in Canada is becoming quite a study, especially in view of the recent legislation introduced throughout the different Provinces dealing with the subject of Workmen's Compensation.

We find among the contributors to this volume such names as Mr. James Berry, F.R.C.S.; Mr. J. Bland-Sutton, F.R.C.S.; Mr. E. Rocke Carling, F.R.C.S.; Mr. G. L. Cheatle, F.R.C.S.; Mr. T. D. Lister, F.R.C.S.; Mr. Percy Sargant, F.R.C.S.; Mr. F. J. Smith, F.R.C.P. (Editor of "Taylor's Medical Jurisprudence"), and Mr. A. H. Tubby, F.R.C.S. It would be a difficult matter for us to attempt to give by way of review any idea as to the contents of Mr. Knocker's important volume. It may suffice it to say, however, that the work contains a mass of information dealing with accidents in every form, and the relations that such accidents bear towards the insurance company. We heartily commend the book to the consideration of medical practitioners, and especially those who are interested in this form of insurance.

W. A. Y.

Diseases of the Joints and Spine. By Howard Marsh, F.R.C.S., Professor of Surgery, University of Cambridge, and C. Gordon Watson, F.R.C.S., Assistant Surgeon to St. Bartholomew's Hospital. Illustrated, with colored and black-and-white plates. New edition, 632 pages. 1910. $3.75. London: Cassell & Co. Toronto: D. T. McAinsh & Co.

This work, since the appearance of its first issue about 1890, has been deservedly a favorite. Its conciseness, its strongly marked clinical features, its lucidity, and its presentation of the work of a richly experienced surgeon in joint surgery, have made it one of the most valuable reference books for the general practitioner. Since the appearance of the last former edition much advanced work has been done, changing greatly the boundary lines of our knowledge of joint surgery, most of which receives

due attention. During this time the infective forms of arthritis have been carefully studied; the obscure and disabling conditions due to osteo-arthritis have been elucidated and given new classifications; radiography has made us familiar with joint lesions without disturbance of relations; vaccine therapy is showing itself a useful aid; and the strange condition, not well understood, but known as intermittent hydrarthrosis, has made its appearance in surgical literature. All of these get due recognition and receive careful attention from the authors. Having such a conscientious setting forth of the work done in recent years, one is surprised to find no reference to an important advance made by American surgeons, notably by Murphy, of Chicago, and Baer, of Baltimore—the effort to restore motion to ankylosed joints by the interposition of a membrane intended to form a close approach to Nature's own joint lining.

The publisher's share of the work is well done. Few books in the surgeon's library will be found more useful.

B. E. M.

Literary Notes.—Messrs. Bailliere, Tindall & Cox, the well-known medical publishers, of London, announce that the following important works have been published during the last few weeks: "Accidents in Their Medico-Legal Aspect," edited by Douglas Knocker, barrister-at-law, which is intended to be a practical guide for the expert medical witness in cases coming under the Workmen's Compensation Act; it is published at 30s. net. "Manual of Physiology," by G. N. Stewart, M.D., entirely revised, sixth edition, 18s. net. "Military Hygiene," by Lieut.-Col. R. Caldwell, R.A.M.C., second edition, 12s. 6d. net. "A Study of the After-Results of Abdominal Operations," being a record of 1,000 consecutive cases, by A E. Giles, M.D., 10s. 6d. net. "Intestinal Surgery," by L. A. Bidwell, F.R.C.S., second edition, 6s. net. "Gynecological Therapeutics," by S. J. Aarons, M.D., 5s. net. "Physiological Principles in Treatment," by W. Langdon Brown, M.D., second edition, 5s. net. "Syphilis: Its Diagnosis and Treatment," by Colonel F. J. Lambkin, R.A.M.C., 5s. net. "Hemoglobinuria," by A. Charpentier, M.D., 3s. 6d. net. "Some Considerations of Medical Education," by S. Squire Sprigge, M.D., 2s. 6d. net. "Medical Supervision in

Schools,'' being an account of the systems at work in Great Britain, Switzerland, Germany, Canada, and the United States; by E. M. Steven, M.B., Royal Commissioner for South Australia, 1910; price 5s. net; small 4to, with 40 illustrations.

These works may be had through any Canadian book store, or direct from the publishers.

Arthritis Deformans, comprising Rheumatoid Arthritis, Osteo-arthritis and Spondylitis Deformans. By R. Llewellyn Jones, M.B., Lond.; Fellow and Member of the Council of British Balneological and Climatological Society; formerly Medical Officer, Royal Mineral Water Hospital, Bath. Thirty-eight full-page plates. New York: William Wood & Co.

To those who wish a clear conception of this hitherto hazy subject, this book is warmly recommended. It is written in most enjoyable style, is well illustrated, and indicates on the part of the author extensive experience and deep thought.

He divides Arthritis Deformans into two distinct classes—Rheumatoid Arthritis and Osteo-arthritis. It is in relation to the former that his principal new work has been done. Up to the present, the advocates of the infectious theory of origin, and of the toxic, have been fairly evenly divided, the old neural theory having been practically abandoned. Jones now suggests that the condition is a toxic tropho-neurosis, meaning that the joint lesions are the result of the action of toxins on the central nervous system. This theory he backs up with a large number of clinical observations and a good deal of ingenious argument, and while it is evident that in his enthusiasm to prove the correctness of the theory, he uses arguments that are not tenable, nevertheless, providing his clinical observations are correct, the theory would appear to be the most plausible so far advanced. The principal arguments in favor of a tropho-neurosis are the presence of such premonitory symptoms as attacks of local syncope and asphyxia, as in Raynard's disease, muscular cramps, and atrophy, neuralgia, hyperesthesia and anesthesia and occasional herpetic eruptions. It is often possible to establish the fact that these premonitory signs appear in the areas in which the joint swellings later first occur, or in remote areas whose nerve supply comes from the same segment of the cord. For

instance, he records cases in which polyarthritis commencing in the proximal inter-phalangeal joints was preceded by attacks of local syncope, the fingers becoming "dead white," localized sweating in the palm of the hand, atrophy of the fore-arm and atrophy of the muscles of the shoulder girdle, all of which areas are supplied by the eighth cervical segment.

Under Prognosis he lays particular stress on an early diagnosis and the early institution of treatment if good results are to be obtained. Many cases are quoted in which localized areas of infection in the mouth, nose or genito-urinary passages, probable sources of intoxication, have been discovered and successfully treated with a disappearance of the joint symptoms. The same is true of digestive disturbances. The persistence of muscular twitchings, sweatings and vasomotor disturbances such as localized asphyxia and syncope, even in the presence of an apparent cessation of acuteness in the joints, is a bad sign and is usually followed by joint exacerbations. The chapter on treatment is an outline of the routine at such places as Bath.

Under the heading Spondylitis Deformans is discussed the several varieties of deforming arthritis which have hitherto been without classification. Jones divides them into the two classes, Rheumatoid Arthritis and Osteo-arthritis and refers to a long series of clinical records and autopy reports to show that all the forms of this affection come under these two divisions. Still's disease he views as simply a form of rheumatoid arthritis occurring in children. W. E. G.

On Acute Intestinal Toxemia in Infants. By Ralph Vincent, M.D., M.R.C.P., Senior Physician and Director of the Research Laboratory, the Infants' Hospital, London. London: Bailliere, Tindall & Cox. 1911.

This little book of 83 pages details an experimental investigation of the etiology and pathology of epidemic or summer diarrhea, which was the subject of a lecture by the author before the Glasgow Obstetrical and Gynecological Society, Nov. 23rd, 1910.

It is an exceedingly lucid and convincing contribution to our knowledge of a subject of the greatest practical importance, and should be read by everyone interested in the problems of milk

supply and infant feeding. It advances strong arguments for the use of pure raw milk as a food, based not only on clinical results, but on experimental proof that the peculiar protective properties of milk are destroyed by boiling, pasteurization and sterilization. H. B. A.

A Handbook of Intestinal Surgery. By Leonard A. Bidwell, F.R.C.S., Surgeon, West London Hospital; Lecturer on Intestinal Surgery, and Dean of the Post-Graduate College; Consulting Surgeon to the Blackheath and Charlton and Diss Hospitals, etc. Second edition. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden. 1910.

This work of 215 pages contains a detailed description of the various methods employed in the performance of the operations of intestinal surgery. It is the outcome of work done by the author in the conduct of a class at the West London Post-Graduate College, which was established for the purpose of instruction in intestinal surgery. It will be found an admirable guide for carrying out the various methods of intestinal anastomosis, the surgery of gastric ulcer, appendectomy, and the general treatment of an abdominal wound. A. P.

The Ear and Its Diseases. By Albert A. Gray, M.D., Laureate of the Lenval Prize in Otology, International Medical Congress, 1909, of the Fellow of the Royal Society of Edinburgh; Surgeon for Diseases of the Ear, Victoria Infirmary, Glasgow; Surgeon for Diseases of the Ear and Throat, Glasgow Cancer Hospital; Author of "The Labyrinth of Animals." With stereoscope, and 123 illustrations, of which 37 are stereoscopic. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden. 1910.

One seldom has an opportunity of reading a small book with so much pleasure and surprise, in that the author has been able to put so much valuable information in such a comparatively small space. The author has a reputation to keep up, and this work simply maintains what his reputation demands. The thirty-seven stereoscopic pictures of preparations made by the author form one of the most delightful features of the book, and

explain better than has hitherto been done in print the normal and pathological anatomy of the middle and internal ear. So many very good books on otology have appeared within the last few years that one wonders if the field is not overdone; but this work is of such a high order that placing it in a class by itself is simple justice. P. G. G.

State Board Examination Questions and Answers of Forty-One States and Two Canadian Provinces. A practical work giving authentic questions and authoritative answers that will prove helpful in passing State Board examinations. Reprinted from the *Medical Record.* Third edition; revised and greatly enlarged. New York: William Wood & Company, 1910.

This is a very useful guide for those who are presenting themselves as candidates for the various State Board examinations conducted throughout the United States. The book which contains 819 pages, gives not only the questions which are set in the examination papers, but also an indication of the answers which are required in the individual instances.

A. P.

The Treatment of Disease. A Manual of Practical Medicine. By Reynold Webb Wilcox, M.A., M.D., LL.D., Professor of Medicine (retired) at the New York Post-Graduate Medical School and Hospital; Consulting Physician to St. Mark's and to the Nassau Hospital; formerly President of the American Therapeutic Society; Fellow of the American Academy of Medicine and of the American Association for the Advancement of Science; Honorary Member of the Connecticut State Medical Society; President of the Medical Association of the Greater City of New York; Vice-President of the Society of Medical Jurisprudence; formerly President of the Harvard Medical Society; formerly Vice-Chairman of the Revision Committee of the United States Pharmacopeia, etc. Third edition; thoroughly revised and enlarged. Philadelphia: P. Blakiston's Son & Company, 1012 Walnut St. 1911.

Dr. R. W. Wilcox's book appears now in its third edition,

making a volume of one thousand or more pages. When any medical work appears in its third edition in three years and a half, it says a good deal for the value of the material presented, and is indeed a compliment to the author. The third edition is divided into twelve chapters, and deals with Infectious Diseases, Constitutional Diseases, Intoxications, Diseases of the Digestive System and Peritoneum, Diseases of the Blood, Diseases of the Ductless Glands, Diseases of the Heart and Blood Vessels, Diseases of the Respiratory System, Diseases of the Urinary System, Diseases of the Nervous System, Diseases of the Muscular System, and Parasitic Diseases.

Perhaps the best recommendation we can give this work is to state that it is the result of twenty-five years of teaching. The author now presents to the profession the result of that experience, and has succeeded in doing so in a manner that should meet with the approval of a large number of buyers.

Précis du Traitement des Fractures, par le Massage et la Mobilisation, par le Dr. Just Lucas-Championniere. Editeur, G. Steinheil, 2 Rue Casimir-Delavigne, Paris.

Diverse teaching in regard to the treatment of fractures should make the subject one of absorbing interest. The operative treatment of Lane, with a view to accurate adjustment and fixation, on the one hand, and the mobilization teaching of Lucas-Championnière on the other, leave a wide field between, which radiography, disability and deformity show to be dotted thickly with results which cannot be regarded with unalloyed satisfaction.

In the management of fractures and in the teaching of the schools there is much to be desired. Accurate apposition, though desirable, is not essential to a good functional result; a moderate amount of shortening is not a serious defect; but a foot unduly everted or inverted, a joint limited in its movement, a joint fragment misplaced, angular union of the fragments of a long bone, non-union of fragments, muscles fast bound or rendered paretic through ischemia, are a serious handicap, and, as court records show, are found present all too frequently.

For twenty-five years the author has been advocating his methods, and there can be no doubt that he has had an important

influence in correcting many errors; but his advocacy is extreme. His teaching is often misrepresented. On page 110 he states that the assertion that his methods imply giving up all apparatus has never been made except by his enemies. When the author asserts that his methods are applicable to all fractures he must be understood to mean that apparatus is *sometimes* required, and that rest should be absolute in *some cases for a limited time.* A fair reading of the context would show that such is his teaching.

The strong statements made in opposition to the author's practice are made by those who have not become fully acquainted with it.

Though the book contains many seeming contradictions, and is a splendid exhibition of egotism, yet it will repay reading from cover to cover. B. E. M.

A Compend of the Active Principles. With Symptomatic Indications for Their Therapeutic Use. By HAROLD HAMILTON REDFIELD, A.B., M.D., Associate Professor of Therapeutics, Bennett Medical College, Chicago; Professor of Therapeutics and Physiology, Reliance Medical College, Chicago. The Clinic Publishing Company, Chicago, Ill. 1910.

In this little volume the author has favored the profession with some valuable material in condensed form, epitomizing "certain facts concerning some of the most valuable of the active principle remedies." The volume covers but one hundred pages and contains a fund of information regarding alkaloidal materia medica. W. A. Y.

Diseases of the Pancreas: Their Cause and Nature. By EUGENE L. OPIE, Professor of Pathology, Washington University, St. Louis, Mo.; formerly Member of the Rockefeller Institute for Medical Research, and Pathologist to the Presbyterian Hospital of New York City. Second edition; rewritten; illustrated. Philadelphia and London: J. B. Lippincott Company. 1910.

This book by Doctor Opie is already widely known, and the present volume is the second edition which has appeared. The author has devoted infinite pains to the preparation of a work

which not only gives us the results of his own investigation and research, but is also a complete summary of the literature published on this somewhat obscure subject. It will be found probably the best guide to our present knowledge of the diseases of the pancreas which exists in the English language.

The book should be possessed by every clinician. Within this volume, which contains 387 pages, with numerous illustrations, will be found material which forms an excellent guide to diagnosis, prognosis and treatment of diseases of the pancreas.

A. P.

Food and Feeding in Health and Disease. A Manual of Practical Dietetics. By CHALMERS WATSON, M.D., F.R.C.P. (Edin.); Assistant Physician, Royal Infirmary, Edinburgh; Editor Encyclopedia Medica. Published by Oliver & Boyd, Edinburgh and London.

We know of no work on this subject so fully worthy of the perusal and careful study of the physician in active practice. This subject frequently proves troublesome to each and every one of us, and as a reference handbook will, we feel sure, be much sought after and prove a valuable friend in need. Dr. Watson has bestowed an enormous amount of hard work and scientific research, enhanced by experiment and ripe experience, in the compilation of this work. The result being a book we can thoroughly recommend to every practitioner.

The opening chapters deal with food from a physiological aspect, No. I. being Food and Its Functions; II., Digestion, Absorption, and Metabolism of Food, Role of Bacteria; III., Daily Amount and Character of Food, and Factors Modifying It.

This subject matter is clearly and tersely put, and will repay manifold careful reading and consideration of any medical practitioner. He further considers various foods, values as to nutrition, digestion of, absorption, etc., taking milk, eggs, animal food, vegetable food, beverages, water, tea, coffee, alcohol, etc., food adulterations, proprietary foods, etc., then dealing clearly and helpfully with feeding in disease of every nature, giving that which is good and beneficial and those hurtful and to be avoided, the reasons thereof being convincingly portrayed.

The chapter on the feeding of infants and young children in

health and disease is written by Dr. Dingwall Fordyce. It is forceful and eminently practical, not deluged with mystifying percentages, but clear, concise and easily digested. The first paragraph in the preface states clearly the object of the work, and from cover to cover he maintains an even gait of never-failing interest.

"The aim of this work is purely practical. It aims at providing a complete and practical epitome for the dietetic student. It is now many years since the late Sir Henry Thompson, a distinguished authority on dietetics, pointed out that no one can be a really accomplished practitioner who has not made dietetic principles and practice an important part of his professional education. *Yet the subject of dietetics has still no recognized place in medical teaching, and the facilities for students acquiring a practical knowledge of it can hardly be described as adequate.*" A. B.

A New Booklet on Treatment of Diseases of the Ear, Nose, Throat and Lungs.

"Suggestions and Methods" is the title of a very interesting little booklet on the treatment of diseases of the ear, nose, throat and lungs. This is a subject of particular interest at this season of the year. This booklet may be obtained of The Globe Manufacturing Company, Battle Creek, Mich.

Dawn of the Fourth Era in Surgery, and other short articles previously published. By Robert T. Morris, A.M., M.D., Professor of Surgery in the New York Post-Graduate Medical School and Hospital; Member of the American Medical Association, the New York Academy of Medicine; and other national and local societies. Philadelphia and London: The W. B. Saunders Company. 1910.

This volume consists of a collection of articles which have already appeared in the medical press. The author decided to collaborate the articles in the form of a small book, as the requests received by him for reprints became so numerous. The volume consists of, in all, 143 pages, divided into twelve or more chapters. In his work Dr. R. T. Morris deals with such subjects as "The Hand of Iron in the Glove of Rubber," "The Advan-

tages of Expeditious Surgical Work," "My Change of View in Appendicitis Work," "The Dawn of the Fourth or Physiologic Era in Surgery," and "The Choice of Procedure in Cases of Loose Kidney." The work is quite interesting, and our readers might do a great deal worse than purchase it.

Practical Bacteriology. Blood Work and Animal Parasitology, including Bacteriological Keys, Zoological Tables and Explanatory Clinical Notes. By E. R. Stitt, A.B., Ph.G., M.D., Associate Professor of Medical Zoology, Philippine Medical School. 335 pages with 91 illustrations. Philadelphia: P. Blakiston's Son & Co.

This comparatively small book is divided into four parts. Under the heading of bacteriology apparatus, preparation of media, staining methods, identification of bacteria, immunity and practical methods of immunity are discussed. In the second part modern methods for examination of the blood are described, and obsolete methods are wisely omitted. Part three is one hundred pages of useful, interesting and clear description of animal parasitology by an authority on the subject. In part four the clinical application of the other three parts is described.

The book is easily one of the best of the many of its kind. The explanations are clear; the methods described are simple and yet up-to-date. To all engaged in laboratory work it is to be recommended, and to those who are not in touch with the latest teaching in immunity it will prove most instructive.

G. S. S.

Salvarsan or "606." (Dioxy-Diamino-Arsenobenzol.) Its Chemistry, Pharmacy and Therapeutics. By W. Harrison Martindale, Ph.D., Marburg, F.C.S., and W. Wynn Westcott, M.B. Lond., D.P.H., H.M.'s Coroner for North East London. London: H. K. Lewis, 136 Gower Street, W.C. 1911.

The authors first discuss the chemical constitution of this widely discussed remedy. Its full name is dioxy-diamino-arsenobenzol di-hydrochloride. It contains about 34 per cent. of arsenic, and by the addition of hydrochloric acid to the compound (as shown by its name), it is slowly and completely soluble in water.

Owing to its being easily oxidized, it is supplied in her-

metically sealed vacuum glass tubes, each containing gram 0.6, equal to about 9 grains.

It is a bright yellow powder, and, if at all altered (either grey or brown), should on no account be used.

It is given either intravenously, or by deep injection into the muscles. As the solution is acid it has to be neutralized, or rather made slightly alkaline before injection, as the neutral solution itself is very insoluble.

They then discuss the various methods of administration. They compare the treatment of syphilis with this and other remedies. The remedy should not be used if there is any serious internal disease, especially of the brain or kidneys.

The book contains a long list of references to the now extensive literature on the subject, and should prove useful to anyone who proposes using this remedy; a remedy which calls for a great deal of care in its administration. A. M'P.

The Problem of Race Betterment. By J. Ewing Mears, M.D., LL.D., Philadelphia. Published by Wm. J. Dornan, 701-709 Arch Street. 1910.

This essay favors asexualization as a remedial measure for the prevention of procreation in the confirmed criminal, pervert, degenerate, idiot, imbecile, epileptic, and vicious insane, the object being the betterment of the human race through the arrest of degeneracy, and the mental, moral and physical improvement of the defective subject.

A list of laws enacted by States authorizing surgical procedures to prevent procreation in criminal and defective subjects is given. The subject is presented very well, and the author makes out a good case. J. J. C.

Medical Supervision in Schools. By Edward Miller Steven, M.B. London: Baillière, Tindall and Cox.

Dr. Steven was appointed in 1909 as a Royal Commissioner for South Australia to examine into the working of systems of medical supervision in schools, and travelled to England, Scotland, Switzerland, the United States and Canada, in performing his important mission. Inasmuch as he describes what he saw in each place, a certain amount of repetition is inevitable, but the book is a useful one to any School Board, or to any person who,

for any reason, wishes to obtain a working knowledge of the subject. His description of the work in England and Scotland is the best part of the book. In Canada he visited Toronto, and there he seems to have seen Dr. Sheard only. Dr. Sheard astonished him greatly. We can only hope that he will visit Toronto again and meet some of the rest of us, especially when we have our new system of medical inspection of schools in working order.

A good deal of attention is given to practical points, such as the examination of the eyes, mentally defective children, open air schools, baths, cleansing schemes, etc. We have read the book with much interest, and can commend it to anyone interested in the subject. H. M'M.

Diseases of the Stomach and Upper Alimentary Tract. By Anthony Bassler, M.D., Visiting Gastro-enterologist to the People's Hospital, and Visiting Physician to the St. Mark's Hospital Clinic; Member of the American Gastro-enterological and American Medical Associations; Fellow of the New York Academy of Medicine, Etc. Copiously illustrated with numerous half-tone and line text engravings, and fifty-six full page half-tone plates (with nearly 100 figures). Plain and in colors from original photographs and drawings. Philadelphia: F. A. Davis Company, Publishers. 1910.

This is a work for the general practitioner who wishes to make himself more proficient in the special line of gastrology.

The author takes cognisance of the intimate relations existing between diseases of the digestive organs, the general system, and deprecates any tendency to separate gastro-enterology from the wider field of general medicine.

A good deal of space is devoted to laboratory work, including both chemical and microscopical examination of the feces and urine, and in the short chapter on Syphilis a description of Noguchi's modification of the Wassermann test is described and illustrated.

Various positions and shapes of the stomach are shown in fifteen full page X-ray photographs.

The gastric mucous membrane, as seen through the gastroscope, is illustrated in colors.

The various diseases of the mouth esophagus and stomach

are treated in a clear and concise manner, and show the personal work of the author, rather than a rehearsal of the opinions of others.

In treatment, use is made of all the usual methods, viz., hygiene, diet, exercise, douching, spraying, electricity and medicinal measures.

We consider this an excellent work and well adapted to the wants of the general practitioner. M. J. W.

La Vieillesse. Moyens de la prévenir et de la combattre. Par Le Dr. A. Lorand. Libraire: J. B. Baillière et Fils, Paris.

This is a very interesting book. As Cohnheim and Mueller and others have, he looks upon old age as a normal, physiological climax, but he describes a premature senility which is not normal.

Chief among the causes of early senility are changes in the great blood glands and the presence of toxines in the system.

As a means of counteracting the noxious agents, whose deleterious influences cause the characteristics of youth to vanish before their due time, the chief stress is laid upon prophylaxis—by prophylaxis of hygienic living and the use of simple, natural, therapeutic means. Diet and its chemistry are presented lucidly.

Every practitioner would find this an instructive and thought-provoking book, supplying him with many useful directions for the guidance of his patients. B. E. M.

Syphilis: Its Diagnosis and Treatment. By F. J. Lambkin, Col. R.A.M.C.; Lecturer on Syphilology, Royal Army Medical College, London; late Specialist at the Army Headquarters, India, etc. With preface by Sir Frederick Treves, Bart., G.C.V.O., C.B., LL.D. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden. 1910.

This work, which contains a preface written by Mr. Treves, will be found a serviceable guide to our present knowledge of syphilis. It is written by Col. Lambkin, who is a lecturer on this subject in the Royal Army Medical College, London. He was a specialist in the treatment of this disease at the army headquarters in India, where he has had an opportunity of observing the clinical manifestations of syphilis to an extent which is seldom possible to most hospital surgeons, and his conclusions

and suggestions will therefore be found of practical value, more particularly in the diagnosis, prognosis and treatment of the disease. Unfortunately, the work was published before a knowledge of Ehrlich's therapeutic measures had become known to the profession, but a knowledge of this may readily be obtained by the reader in current medical literature. A. P.

Lessons on the Eye. For the Use of Undergraduate Students. By Frank L. Henderson, M.D., Ex-President of the St. Louis Medical Society; Ophthalmic Surgeon to St. Mary's Infirmary, etc. Fourth edition, revised. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1910.

The only claim to originality made for this work lies in its omissions. It is intended to take the place of the notes usually taken by the student in the class room. For this reason such subjects as the minute anatomy of the eye, the fitting of glasses, skiascopy, ophthalmoscopy, etc., are intentionally left out. Diseases which have to be diagnosed by the ophthalmoscope are also treated but briefly. To the teacher this plan seems eminently sane, for the student should be encouraged to obtain accurate and useful knowledge which he may need every day, and leave till after graduation the acquiring of an intimacy with the more recondite subdivisions of the subject. M.

The Sexual Disabilities of Man and Their Treatment. By Arthur Cooper, Consulting Surgeon to the Westminster Hospital General Dispensary; Formerly House Surgeon to the Male Lock Hospital, London. Second edition, revised and enlarged. London: H. K. Lewis, 136 Gower St., W.C. 1910.

This neat little volume deals with a subject that seems to deserve more consideration than it generally receives, at the hands of the average practitioner. When we come to understand that from 10% to 25% of all sterile marriages are due to some faulty condition of the male, it seems extraordinary that the female is so constantly looked upon as the only cause of this condition, and is subjected to examinations, treatment and even operation, before any examination of the male is made. The writer deals fully with every part of this subject, and details the more common conditions and their treatment. The general consideration of "Impotence," and the questions that depend upon

it, are well reviewed. To the young medical man more particularly this book is to be recommended. It is written in a very readable style, and full of good suggestions.

A. J. J.

World Corporation is the name of a small work by K. C. Gillette, published by The New England News Company, of Boston.

This work would seem to advocate the combination of all the trusts in the interests of the people. The author maintains that "All crimes, all immoral tendencies, are attributable, and can be distinctly traced to our competitive system, and we can wipe out all crime by changing the system," that is, by World Corporation.

A company has already been formed with the idea of bringing about this reform (?) The creed is: I believe in World Corporation for the people; in international co-operation (with the idea of securing universal peace), and the ownership of all property and the control of all industry by the people.

Messrs. Baillière, Tindall & Cox, the well known medical publishers of London, inform us that they have just published the new edition of Stewart's "Manual of Physiology." This work has been extensively revised, and in many parts entirely rewritten, to which a considerable amount of new matter has been added.

The new edition of another important work has just come through the press—that of Monro's "Manual of Medicine"; although only a few years have elapsed since the first edition of this manual was published, it has won its way into nearly every British School of Medicine. The reason for this is that it is unusually comprehensive, which, together with its conciseness, its clearness of statement, its soundness of view and its universally modern teaching, makes it one of the best text-books of its class in English. It is also free from redundance and devoid of superfluities, yet supplies the student in crisp and readily grasped teaching, essentials to face the terrors of the examination room with confidence.

Another important publication is "Syphilis; Its Diagnosis and Treatment," with a special section on the Ehrlich-Hata-

Treatment "606" by Col. F. J. Lambkin, F.R.C.S., Lecturer on Syphilology Royal Army Medical Corps.

These books can be obtained through any Canadian book store.

Annales de Gynécologie et d'Obstétrique. Octobre, 1910; Novembre-Decembre, 1910.

Two copies of the Annales de Gynécologie et d'Obstétrique, being for the months of October and November-December, 1910, have been received.

These journals contain the papers (with the discussions on the same) read in the Obstetrical Section of the French National Congress of Gynecology, Obstetrics and Pediatrics. Sixth session, held at Toulouse, September 22-27, 1910.

J. J. C.

The Practical Medicine Series. Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of GUSTAVUS P. HEAD, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School; CHARLES L. MIX, A.M., M.D., Professor of Physical Diagnosis in the North-western University Medical School. Volume VI. General Medicine edited by FRANK BILLINGS, M.S., M.D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. H. SALISBURY, A.M., M.D., Professor of Medicine, Chicago Clinical School. Series 1910. Chicago: The Year Book Publishers, 40 Dearborn Street.

This is Volume VI. of a series which many of us have come to look forward to with pleasure each year.

It contains all that is new and interesting on infectious diseases, diseases of the digestive tract, diseases of the liver, of the pancreas, of the peritoneum, also an article on abdominal disequilibrium, one on tetany, and one on tobacco toxemia. The first of these contains some ideas that will be new to many readers. Amongst the organic diseases, those of the stomach attract particular attention.

The volume contains, as usual in all this series, extracts from almost everything that is of interest and of an up-to-date character on the subjects mentioned.

A. J. J.

Vaccine Therapy: Its Administration, Value and Limitations. A discussion opened by Sir Almroth E. Wright, M.D., F.R.S. From the Proceedings of the Royal Society of Medicine, 1910. Vol. III. Longmans, Green & Co., 39 Paternoster Row, London, New York, Calcutta, Bombay. 1910.

This volume contains the Report of the Second General Discussion held by the Royal Society of Medicine.

The first meeting took place on May 23, 1910, when the opening address was delivered by Sir Almroth Wright. The present publication is intended to give to practitioners in general a clear idea of the scope and aims of the method and the results hitherto achieved. There were 34 contributors to the discussion. J. J. C.

GRAPE JUICE—ITS FOOD VALUE *

Physicians know well how, during recuperation from illness, it is frequently a very difficult matter to find for certain patients a food that is easily digested and assimilated and at the same time agreeable. In many instances patients get tired of the usual milk diet and long for a little change.

A few years ago Grape Juice as a food came into prominence, and has since been very frequently adopted with good results. In the critical period of recovery from illness, when there is so much tissue waste, it will be found that the juice of the grape makes an easily assimilable form of food, one that is not only palatable and refreshing, especially when iced, but mildly stimulating and at the same time nutritious.

Medical men will find that the Grape Juice, as bottled by E. D. Smith, of Winona, Ontario, who for many years has made a specialty of the same, makes a splendid substitute for milk diet, and many patients will be found who will "thrive and grow fat" on it, even when all other forms of diet are excluded. Smith's Grape Juice supplies the system with a large amount of nourishment at the smallest expenditure of vital force. Medical men are respectfully asked to try it.

*Publisher's Department.

The Canadian Journal of Medicine and Surgery

A Journal published monthly in the interests of Medicine and Surgery

Vol. XXIX TORONTO, APRIL, 1911 No 4

Original Contributions

REPORT OF A CASE OF NEURASTHENIA TERMINATING IN INSANITY

BY CAMPBELL MEYERS, M.D.

It is only a few years since it was believed by the profession that cases of neurasthenia rarely or never terminated in insanity, in fact at the present day there are some who believe that a man is no more in danger of becoming insane from neurasthenia than from a broken leg. Facts, however, are being brought forward daily to prove that a neurasthenic condition is often the forerunner of an attack of acute insanity, and that the treatment of the neurasthenia by appropriate measures will often avert the more serious disease. The truth of this statement is founded, not more on the successes in treatment than on the failures, which naturally occur in certain cases, viz., those cases, which, while actually under treatment, gradually become more deeply affected, and pass over the boundary line of insanity.

A synopsis of the history is as follows:

W. R. J., age 58, born in England, but in Canada since four years of age. Machinist by trade. Admitted to the Nervous Wards of the Toronto General Hospital on May 24th, 1910.

Complaints: Twitchings all over body, pain in top of his head and down spine, fluttering around heart, particularly on waking, vague fears, sleeplessness, stomach trouble.

Duration: About two months.

Family History: Father died at 26—accident. Mother died at 56—typhoid. Half-brother and half-sister—both well. No history of nervous or mental disease in family can be obtained. Patient has been married twice, first at 23 years of age and second time at 50. By first marriage he had two children, both healthy. By second marriage he has no children.

Personal History: As a child was always healthy. Commenced to learn his trade at 18. He has been with the present firm 31 years, and his character as a workman is excellent, he having acted as a foreman for many years. He always got on well with his employers and fellow-workmen, and always worked very hard, as he wished to be leading in everything. Has used tobacco and alcohol, but not to any excess, and his habits have always been temperate. He has been much disturbed during the past six months owing to domestic trouble. His wife and step-daughter do not agree, and this has been the source of great anxiety to him. He says he has begged and prayed them to get on together.

Past Illnesses: He had erysipelas when 14 years of age; otherwise he has always had excellent health until four years ago, when he had an attack, said to be nervous exhaustion, in which the symptoms were similar to those he now suffers from, but were not so severe, and he was able to return to work after three weeks.

Present Illness: With the exception of ten days of recent holidays he has worked constantly until a week before he entered the hospital. His first symptoms were indigestion and insomnia, which steadily became more intense. He did not care to meet people and he felt fagged. He began to have pains in the top of his head, which gradually became more severe, indigestion grew worse, and he could eat very little. He stopped work because he was unable to concentrate his mind upon it, feared he would not be able to carry it out properly, that his superiors would come and find fault with him; he did not want to be bothered. His sleep at this time was very bad, and troubled by unpleasant dreams. His expression was anxious and strained, and he began to be very blue and depressed and feared he could not get well. He became irritable, which was quite contrary to his usual disposition; his thoughts were very self-centred, and he had no energy or ambition to work. Had a trembling, creeping

sensation in his legs and arms. There was no change in his family affections. For a few days he feared he was going out of his mind and would as soon have been dead. He would become emotional and weep at times, and has worried much over the possibility of losing his position if his illness should be prolonged. Usually he is depressed, though at times he may brighten up, so that apparently there is nothing wrong. He talks slowly and distinctly, almost always about himself. Seems quite bright intellectually, has complete control of himself, and does not appear to be at all nervous. No twitching of muscles of face in conversation.

Physical examination shows well-developed male with good muscular development. Expression of face is strained and anxious.

Circulatory System—Radial and anterior tibial arteries readily palpable; walls seem thickened and hardened.

Respiratory System—Negative.

Digestive System—Except for symptoms of indigestion, negative.

Genito-Urinary System—Negative, urine normal.

Nervous System—No evidence of any organic disease.

Progress Notes: He began to improve soon after entering the hospital, so that at the end of ten days his insomnia had lessened, his digestion was better, and the pain in his head less troublesome. He was more cheerful, less self-centred, and felt that he would soon be well if he could leave the "worry behind." He had gained steadily in weight, which had increased three and three-quarter pounds in the ten days. He felt he would soon be able to resume his work, and was in every way doing as well as could be expected in this time; in fact, the outlook for his recovery appeared to me in every way favorable if he continued his treatment.

At this time the Canadian Medical Association was in session here, and some of the visiting members kindly inspected the nervous wards with me. I showed them this case, and after reading the history and examining the patient, I asked one of them, a leading neurologist, from the United States, if he thought there was any danger of this man developing insanity. His reply was that "there was not the slightest danger of it." He suggested sending the patient out at once to resume his work.

I decided to follow the advice, although I had many misgivings as to the result, and discharged him on June 5th, with the instructions that he should resume his work. A few days after leaving the hospital his wife informed me he was not so well, and, although he continued his work, which was made as easy as possible for him, he found that he was making mistakes in it and that he could not do it at all satisfactorily. She wished to have him return at once to the hospital, but I encouraged his perseverance at his work, and he continued it until he was obliged to give up on June 26th, when he was re-admitted, having been out for three weeks.

The notes on re-admission state that he was discouraged and depressed almost to melancholia. He states that he was unable to continue his work owing to mistakes and misinterpretation of orders. He cut up some new belting which he should not have done and then tried to conceal the fact from his employers. He knew he was making mistakes, but was unable to prevent it, and knew he was feeling wrong in his head. He felt that he could not grasp his work in the condition he was in at the time. His sleep had become worse, his appetite poor, and he tired easily. This tiredness seemed to be mental and not physical. He much regrets his inability to grasp his work, after having made every possible effort to do so.

From the time of his re-admission the course of his disease was almost steadily downwards. On June 29th and 30th the notes state that patient looks quite distressed this morning. Seems to be completely controlled by whatever idea has possession of his mind at the time being, and seems to think about it until he gets so excited that he cannot lie still. All his actions seem to depend on what someone else tells him to do. Is very despondent, wringing his hands and saying, "What shall I do?" On July 15th the notes state that his condition seems very much the same as during the past few days; he is morose, depressed and rather more restless, was walking up and down the ward muttering to himself. Was reading a book, keeping it half concealed under the bed-clothes; looks hopeless and dejected. On July 16th, patient restless and suspicious, following orderly and nurse about from one place to another, as if he were afraid to be alone. Says he cannot see any change for the better since coming in. On July 17th (or less than three weeks after his return) the

notes state that he thinks he is to be sent to jail for ten years because he said when he was sick that he would commit suicide. He thinks the doctors are detectives and that the nurses are spying on him. On July 21st patient is suspicious of everyone, and says it won't make any difference whether he tells us what is troubling him or not. Fears he is to be taken to court for some wrong he has done. Patient has lost one and one-half pounds in weight during the past week. On July 24th patient states that he should go home and give himself up to the police, that this is the only course to pursue, and that he will have to go to jail for a long time because he has stolen money from his employers, who would not let him off on any explanation; says if he does not give himself up the police will be kept here always; that they are trying to starve him out of the nervous wards; says if he had escaped from here police would soon have caught him, as they are watching him closely; asks if policeman is not outside the door; says his wife will be ruined on account of his actions; also says he thinks he is pretty well, and that there is nothing the matter with him. Under these circumstances one course only remained, viz., to transfer him to an asylum. He was sent to Mimico on July 24th, just four weeks after his re-admission, and he still remains there. Dr. Beemer informs me, however, that he has fair hopes of his recovery.

There are several points of interest in this history. First, in regard to the attack four years ago, might this not have been of the same nature and have led to the same result had it been more intense? Would a physician treating him at this time have considered the possibility of the development of insanity from an intensification of the symptoms, which were then present? This leads me to speak of another case, which was, by the way, the first patient admitted to the nervous wards after their inception. This patient, R. M. (a woman), came under treatment in an early stage of her disease, and was discharged recovered, being placed on the list in the hospital report for the year, as a case in which insanity had been averted. She enjoyed more than four years of useful, active life with good health, after leaving the hospital, but owing to the death of her husband, together with financial and other worries, she again broke down nervously. She did not return for treatment until her trouble was very pronounced, in fact she was on the boundary line of insanity, and

after a short period she was sent to an asylum. The symptoms were the same on both admissions, except that they were much more intense on the latter occasion, and treatment was of no avail.

I believe there are many cases of so-called neurasthenia, in which psychical symptoms predominate, which had been successfully treated, and in which a prolonged observation of the case would demonstrate the development of insanity at a later date. The question then naturally arises, was insanity not averted at the time by the treatment, and I think there can be only one answer to the question, viz., that it was in many of the cases.

Again, in regard to this man's history, what would have been the result had his treatment not been interrupted, and the additional strain of resuming his work not been put upon him? A consideration of the progress of the case up to the time he was discharged leads me to the belief that he would have recovered, and that instead of being insane to-day, he would be fulfilling his duties as a useful citizen. Not only would insanity in this case have been averted, but if he, even now, recovers his reason, the danger of impairment of his mental faculties, which often follows a prolonged attack of insanity, would also have been obviated.

One further point in conclusion, as to the nomenclature of such cases as the above examples of these functional neuroses. The delimitations of the various functional neuroses are to-day no more distinct than those of the functional psychoses, and consequently no hard and fast lines can be observed in their nosology.

What I would like especially to direct your attention to is the type of disease as we find it clinically, and which the profession commonly regard as neurasthenia. Once this common type of disease is clearly understood in its clinical aspects, the name given to it is of secondary importance. That such cases may and often do develop insanity is beyond doubt, just as it is equally beyond doubt that proper treatment in the early stage of the disease will often avert this most unfortunate result. We have, I believe, in the *early* treatment of this type of functional neuroses, a *practical* and *effective* method for the prevention of acute insanity, the benefits of which can scarcely be overestimated.

Heath Street, Deer Park, Toronto.

NOTES ON A CASE OF THE DIRECT TRANSFUSION OF BLOOD FOR SECONDARY HEMORRHAGE

By Alexander Primrose, M.B., C.M. (Edin.) M.R.C.S (Eng.)
Associate Professor of Clinical Surgery, University of Toronto, Surgeon, Toronto General Hospital.

On November the 2nd, 1910, I exhibited a patient before a post-graduate clinic at the Toronto General Hospital, in which direct transfusion had been carried out successfully and with benefit in a case of secondary hemorrhage. The following are brief notes of the case.

The patient, a man 20 years of age, was admitted into the Toronto General Hospital on October the 17th with a history that ten days previously he had been accidentally cut in the calf of the leg by an adze, which was wielded by a fellow-workman. The wound penetrated deeply and bled profusely, but the hemorrhage was controlled by a doctor who saw him subsequently. He had however lost a considerable amount of blood and on admission to the hospital there was still some oozing and the wound was septic. On examination it was determined that it would be wise to explore the wound under an anesthetic, and the necessary preparation was made, but during the night a profuse hemorrhage occurred suddenly whilst the patient was sleeping. Although the possibility of such an accident was anticipated and a tourniquet had been placed in position to guard against it, the patient lost a very large amount of blood before it was controlled. On operation it was found that the posterior tibial artery and the posterior tibial nerve had been severed. The nerve was sutured and the artery secured well above the seat of the septic wound by a vertical incision communicating with the original transverse cut.

The wound continued to suppurate freely, and one week after the operation another hemorrhage of considerable extent occurred during the night. An emergency operation was at once carried out by my assistant, Dr. E. Stanley Ryerson. An

incision was made in the popliteal space and the posterior tibial artery secured at the lower border of the popliteus muscle. Subsequently the wound continued in a very sloughly condition and was most unhealthy in appearance. His general condition was far from satisfactory, as he had a rapid pulse of low tension, a high temperature, and with a blood count showing 2,850,000 reds with 40 per cent. of hemoglobin.

For some days he appeared to be losing ground rapidly, and I determined to try the effect of direct transfusion. Accordingly his friends were communicated with, and his brother, two years older than the patient, and a strong, robust man, consented to act as donor.

On October the 27th direct transfusion was carried out by Crile's method. The patient had already been treated by the intravenous transfusion of saline on two occasions, the medium basilic vein, first of one arm and then of the other, having been utilized for the purpose. We therefore made the direct transfusion by exposing the cephalic vein just above the bend of the elbow (left). This was exposed and threaded through the Crile canula and turned back over this like a coat sleeve and secured there by ligature. The radial artery (left) of the donor was similarly exposed and divided and the cut end drawn over the vein, which had been secured to the canula. The clamps which had previously been fixed to the vein and artery respectively, were now removed and the donor pumped his blood into the recipient freely and continuously.

The transfusion was continued for fully fifteen minutes. At the end of that time the recipient showed some slight sign of dilatation of the right heart. He became somewhat restless, and there was marked increased rapidity of respiration. The donor's pulse became weak and slightly irregular, whilst his blood pressure fell from 150 to 130, and he complained of feeling dizzy and weak. At this juncture the transfusion was stopped. The operation was carried out under local anesthesia, one-tenth of one per cent. of cocaine being used for the purpose.

Subsequent to the transfusion the recipient expressed satisfaction in the fact that he "felt like a new man." He had re-

gained a considerable amount of color in his lips, which were previously blanched, and his pulse was of much better quality than obtained prior to the transfusion.

The patient was shown at my clinic on November the 2nd, when it was already noted that the wound had taken on a more healthy action. Subsequent to that date improvement has continued, and a healthy granulating surface was substituted for the previous sloughing condition, and the wound is almost completely healed. The red cells have increased so that at the last count they were something over 4,000,000, and his final complete recovery is assured.

This case undoubtedly illustrates the great advantages which have been rightly claimed by Crile for the treatment of patients suffering from serious loss of blood by direct transfusion.

Eye, Ear and Nose

CLINIC—OTO-LARYNGOLOGY*

BY D. J. GIBB WISHART, TORONTO.
Surgeon in Charge, Oto-Laryngology.

The following cases were presented:

Syphilis of the Nose and Pharynx.

In these patients, a male and a female, you see extensive involvement of both the inside of the nose and the external nose and face. In the female, the healed scarring of the left cheek presents a considerable resemblance to that of lupus; but no other confirmatory sign has been found, while the history of syphilis is conclusive. There is nothing out of the ordinary; they merely demonstrate the appearance of tertiary disease as met with in the clinic.

Enucleation of the Tonsil.

Two patients are here shown, both adults, of which one was operated upon three days ago, and the other yesterday. The method followed in each case was as follows: The surface of each tonsil lightly swabbed with 20% solution of cocaine to anesthetize the membranes; after a few minutes a 1% solution of cocaine injected into first, the anterior pillar, just under the membrane; secondly, into the posterior; in both instances, near the top, and the fluid forced in the downward direction; and thirdly, above the tonsil in the supra-tonsillar fossa in an outward direction, the aim being to place the solution in the capsule of the tonsil on its outer aspect, the point at once most difficult to reach, and the source of most pain while operating. The instrument used for this is a large syringe, with an extension shaft 4 inches in length, carrying a short needle bent at right

* Toronto General Hospital, December 4th, 1909.

angles. With this the injection can be accurately placed in each pillar without perforating, as is so easy with a straight needle. About one syringeful is required for each side. A little adrenalin sol. may advantageously be added to the cocaine solution injected. The patient is then allowed to lie down for about ten minutes, after which he is seated in a chair, the head being controlled by a nurse, and a second stands behind the operator, ready to sponge. The incision is made with a narrow knife along the free margin of the anterior pillar, in the peritonsillar space, about one inch in length, and the tonsil seized with a Royce retractor, and drawn well out into the pharynx. With the other hand a Hurd separator is then introduced through the incision, and the tonsil carefully separated from its bed, in front, above, and behind. In this procedure care must be taken to include the whole of the tonsil, especially that in the supra-tonsillar fossa, while at the same time keeping scrupulously outside of the constrictor muscle. The tonsil separation is carried well down towards the base, and as soon as it is sufficiently freed a wire loop is slipped over the retractor, well down to the base, and the remaining tissue cut through. The snare thus applied will usually remove all the tonsil, but it is allowable to leave a fairly thick base, as contraction will ensue. Bleeding may at times be troublesome from above, and a few curved artery forceps should be available wherewith the vessels may be seized and twisted.

Bleeding after removal is, in my experience, less formidable than in the operation with the guillotine, where the tonsil is cut, not enucleated, and easily controlled by the application of a few hot swabs, or a little pressure.

If the pillars have not been wounded the healing will be rapid, and the conformation of the palate unchanged; but otherwise, it will almost certainly be found that the shrinking and scarring will pull one or the other side of the palate down. This is of no inconvenience to the patient.

I prefer this method of removing the tonsil in adults, for in no other way can I be certain of removing the bases of the diseased crypts, and if any of these are left behind, further throat trouble is almost sure to occur; but in children I have not yet decided that enucleation is justifiable in every case,

although I frequently believe that I am justified in removing such tonsils entire, and I do so. This procedure is as yet of too recent use to enable us to adopt enucleation in the majority of children's tonsils.

Facial Paralysis Improved by Relief of Pressure on the Nerve Trunk in the Fallopian Canal.

This boy, whose age is 17 years, entered the hospital with typhoid fever, and during convalescence developed symptoms of mastoid irritation on the right side. There had been a chronic otitis media purulenta present in the right ear for 14 years, during the whole of which time there had been present a right facial paralysis. This paralysis was demonstrated as follows: The palpebral fold is widened; the eye cannot close; the brow wrinkles are absent; lachrymation is noted in cold weather; the furrow below the orbit and the naso-labial folds are present; the right angle of the mouth is lower than the left, and the mouth is drawn to the left side in speaking and laughing; the right ear is quite red, and has a burning sensation; sensation of the right side of the face is diminished; twitching of the mouth and nose are frequent; there is increased, but intermittent, secretion of saliva; mastication is fatiguing unless slow and deliberate; action of the palate and uvula are normal, and sense of taste unaffected; hyperacusis is absent.

Our electrician, Dr. Balmer, reported that with the Faradic current the contraction was good, except in the occipito frontalis, the risorius, buccinator, and orbicularis oris, where it was present, but faint.

On galvanic excitation the contraction was sluggish, more especially in the superior maxillary region, the K.C.C. being greater than the A.C.C. On direct stimulation of the three main branches of the facial nerve, the muscles supplying the upper jaw responded much less than those for the eye and lower jaw.

Radical operation was performed on the 21st of July, and proved to be of more than usual interest and difficulty because the bone was sclerosed throughout, the antrum was obliterated, the middle fossa very low, and the shoulder of the sinus forward. The search for the facial nerve, and the location of the seat of

pressure, was attended, therefore, with unusual difficulties, but, by using the semi-circular canal as a guide, it was finally located and exposed at a point corresponding to the usual situation of the elbow in the floor of the aditus. At this point the Fallopian canal apparently communicated with the middle ear by a fine sinus, in which lay an extension of the thick pyogenic membrane which lined the middle ear.

A further hiatus in the bony wall was located just above and posterior to the foramen ovale, occupied similarly by membrane and debris. The bridge between the sinus and the hiatus was removed and the nerve trunk freed as far as prudence seemed to warrant.

On account of the stress to which the nerve was necessarily exposed during these manipulations an increase in paralysis was expected; but for the first twenty-four hours the indications of facial paresis were materially lessened, particularly about the mouth and eye; but subsequently the indications became much more decided, and there were noted a loss of taste in the right half of the tongue, inability to sniff or smell, and deviation of the tip of the nose to the left.

A week later every symptom was much modified, and I reported the case at the Canadian Medical Association in Winnipeg.

As you see now, the characteristic symptoms of facial paralysis have practically disappeared, and the boy, to his delight, finds himself able to mix among his fellows without a sense of being conspicuous. The report from Dr. Balmer as to the electrical reactions is satisfactory, in that there is a steady improvement, and so I believe we may expect still further improvement in the appearance; but even if that were not to take place, the benefits of operation justified the procedure adopted.

The wound, outside and in, healed completely, and there is some hearing.

Atresia Auris.

This case would be more correctly described as stricture of the external auditory canal. Since childhood the patient, who is now 18 years of age, states she has suffered from foul discharge from the left ear, accompanied by marked deafness and a thundering noise. The discharge is not abundant, and does

not give much annoyance, and there are no other symptoms, such as pain or vertigo. At about half an inch from the entrance, as you can see, the canal narrows to the size of a pin shaft, and the probe can be introduced into this for almost an inch, the walls being apparently equally close the whole length. This variety of lesion is most difficult to treat by any method of dilatation with which I am acquainted, and although the condition of the patient otherwise is most satisfactory, I feel that the only satisfactory solution will be to open up from behind and perform a radical, with a large flap. Even by this method there will be difficulty in controlling the tendency to stenosis.

The walls of the fistula are membranous, and not bony, and the stricture is doubtless the result of the chronic O.M.P. Hyperostoses, and osseus new formations are found at times in similar conditions.

Bleeding Polyp of the Septum (Fibro-Angioma).

The boy, aged 14, presented himself at the clinic on account of epistaxis and nasal obstruction of the right side. As you observe, there is a papillomatous-looking growth attached to the septum by a narrow base near the lower margin, but growing from the cartilage, reddish colored and the size of a wild cherry. Since coming under observation the tendency to bleed has not been evident. No portion has been removed for examination.

These growths have usually a broad base, and present a network of fine fibrous tissue, with numerous thin-walled vessels, covered with normal epithelium. They are not malignant, but tend to recur, so that in removal, which is effected by the snare, it is necessary to destroy the base down to the cartilage by means of the cautery.

Double Frontal Sinus (Killian).

This patient has suffered from a pan-sinusitis, and prior to his arrival in Canada had the right frontal sinus and both antra opened in England. He has attended the clinic for about a year, and at first was so anemic and run down that no extensive operation was possible. The disease was chiefly focussed on the right side, but the left was also involved. The septum was badly deflected to the left, making it impossible to examine the in-

terior. The left antrum was opened through the cheek, and thoroughly cleared of all polypi, but the healthy membrane was left untouched. The outer wall of the nose, up to the root of the inferior turbinate, was then removed, and with it the middle third of this turbinal. After a few weeks of tonics and rest in bed, during which a good deal of fever was present, due probably to a septicemia, the frontal sinus was opened, after Killian's method, which aims to prevent deformity by leaving a wide bridge of bone along the supra-orbital arch, while at the same time removing the entire anterior wall, and the floor as far out as the supra-orbital foramen, and backwards to the anterior ethmoidal foramen. The sinus proved to be very extensive, arching over the entire orbit, and outwards to the outer canthus. It was filled with polypoid degeneration, and the membrane was completely removed, while all the ridges on the surface were carefully smoothed down. At the same time, through the wide opening which this method affords, the entire ethmoidal cells were completely removed, and the anterior wall of the sphenoidal sinus, so as to turn the whole of the upper half of the nose into one large cavity, with smooth walls. The cavity was loosely packed with gauze, and the end brought out through the nose, while the external incision was completely closed with bronze sutures. As you may see, the scar is practically imperceptible, and after almost a year there is but little pitting of the forehead, and this can easily be obviated by paraffin injection.

The pitting is probably due to a shrinking in the bridge of bone, as it is decidedly smaller than at first, but there has been no change in it for several months, so that I do not expect further trouble.

As soon as the patient's condition warranted, the septum was put straight by a submucous resection, and the after-treatment of the left nose gave little trouble. There is no pus, and but slight hypersecretion.

At intervals during the summer the right nose was treated by removal of portions of the ethmoid, and every effort was made to reach the anterior cells, from which most of the pus seemed to be derived; but it finally became evident that the frontal sinus on this side must also be radically treated, and this was done a few weeks ago. It was found that at the earlier opera-

tion in England only a small portion of the anterior wall had been removed, and that the granulations were hemmed in by incomplete septæ, or ridges, but that the sinus was not, although large, quite as extensive as was the case on the left side. The anterior ethmoidal cells, in spite of the treatment through the nose above referred to, were large and badly diseased, and inaccessible from the nasal cavity. This case amply demonstrated the wide access to these ethmoidal cells given by the Killian operation.

As you see, the external wound on the right has healed, as well as that on the left, and as the bridge was made wider, there will, I trust, be less shrinking and pitting.

The general health of the patient has been rendered satisfactory by the removal of the pus-secreting membranes, and he is able to follow his employment in comfort.

Blood-Clot Dressings in Mastoid Operations.

To Dr. Clarence Blake, of Boston, the doyen of the otologists of our continent, must be given the credit of demonstrating how greatly the time of healing of the wound in mastoid surgery can be shortened by the use of this form of dressing. As you are aware, the earlier surgeons contented themselves with making an incision through the tissue merely to the bone, and allowed the pus and necrosed bone to come away through the wound, which was packed from day to day. This consumed time.

Later, the bone itself was attacked, and the diseased areas more or less thoroughly removed; but again the wound was packed, at first firmly, and later on more loosely, but still the wound required much time to fill up from below with granulations.

Dr. Blake ascertained that the blood clot might be used to fill the cavity left by the operation, and the wound closed entirely by stitches, so long as the diseased areas had been completely removed, and the edges of the wound well coapted, while at the same time a sufficient space was left at its lower end for the seepage of the serum squeezed out of the clot in formation.

Difficulties to be expected are from infection of the clot, either through the aditus from the middle ear or through the lips of the wound, from the air. The clot, if infected, may

break down entirely, in which case the healing of the wound is deferred considerably; but so long as even a portion of it becomes organized, the process of cavity filling is thereby hastened.

I show you here a little child, just ready for discharge from hospital. She entered on the 12th Nov. with an acute mastoid, which was opened the next day, and a large amount of diseased bone removed.

After thorough examination to see that no source of infection was left behind, I rubbed the surfaces with iodoform emulsion, and endeavored particularly to apply this into the aditus; thereafter the fleshy surfaces of the wound were curetted till they bled freely, and thus a fresh blood-clot was secured. The edges of the wound were then accurately coapted and sutured with silkworm gut. The blood was wiped off the skin, except along the line of the sutures, where it was carefully left in place. The ordinary dressings were applied.

The stitches were removed on the 16th, with a perfect healing of the wound. The ear continued to discharge till the 23rd, when it completely dried up, and the patient was therefore ready for discharge from hospital on the tenth day.

I believe that had I enlarged the opening in the drum membrane at the time of operation, I would have secured a still speedier result, and that I would have rendered my blood clot safer from infection. As it was, the discharge from the ear was malodorous, and gave rise to anxiety.

I have detained the patient in hospital for two days in order that you may inspect the result.

This method of treating the wound is not adaptable to the radical operation case, but in this boy, who will form the subject of our next remarks, the wound was treated very much in the same way. As the hearing did not require a thin covering of the bony wall of the middle ear, I filled the bone cavity with fresh blood, closed the posterior wound completely, and merely placed a plug of iodoform gauze in the canal. No difficulty occurred; complete healing, both inside and out, was speedily accomplished.

These two cases illustrate what may be done with a blood-

clot dressing, where every particle of diseased tissue is previously removed; but we are not always so fortunate.

SUPPURATION OF THE LABYRINTH, AND OPERATION.

This patient, aged 17 years, entered the hospital on the 23rd of October, suffering from foul discharge from the right ear, accompanied by pain and deafness.

It was ascertained that the discharge was known to have been of at least one year's duration, but that six weeks earlier the ear had become very painful, and gathered and broke; and later on, deafness, which had always existed, became absolute, while vertigo and vomiting developed. The lad was mentally upset, and unable to give his history in any rational way; but from the fact that he was an orphanage boy immigrated from England, that he knew of no acute attack of otitis a year ago, and believed his left ear to be normal, when in reality it showed evidences of healed lesions, it was easily determined that the original date of the right ear condition was childhood.

On examination, the right canal was found to contain a polyp and cholesteatomatous debris. Hearing, with the tuning-forks on the mastoid, was all referred to the left ear. The caloric test could not be satisfactorily employed, as the patient at once became dizzy and fainted, but marked nystagmus to the right with cold water was evident. The optic nerves were normal. Slight tenderness was present on deep pressure over the antrum, but there was no other symptom of mastoid involvement. Temp. 97°. Bacterium in aural discharge D. staphyloc. aureus. Nausea was constant, and the boy was disinclined to walk, but preferred absolute quiet and rest in bed.

It was amply evident from the vomiting, the complete loss of hearing, the vertigo, the nystagmus, and the tendency to fall to and lie on the affected ear, that the disease of the middle ear was encroaching upon the labyrinth and semicircular canals; while, from the character of the debris in the canal, it seemed probable that the mastoid might contain a cholesteatoma. Nor did it seem wise to postpone operation for the purposes of more complete observation and investigation, as the boy was evidently in great misery, and rapidly growing worse. The mastoid was found completely sclerosed, no sign of a cell being left anywhere, and even the antrum entirely obliterated. Every precaution

was taken to avoid injury to the facial nerve, but it was exposed at the point where it approaches the floor of the aditus, and to ascertain the extent of the injury to the nerve it was decided to postpone the investigation of the internal ear until after the contents of the middle ear had been thoroughly removed. The wound was therefore left open. The next day some facial paralysis was present, but sensation was equally active on both sides of the tongue. The mental condition was improved, but vertigo was still present. After a few days the wound was reopened and the facial nerve isolated where it lay exposed. The external semi-circular canal was then opened, the bridge between the round and oval windows removed, and the cochlea opened, but as the deeper parts of the internal ear seemed healthy, further exploration seemed undesirable. As the hearing was absent, the posterior wound was completely closed, and the cavity of the mastoid allowed to fill with blood clot, a light packing of iodoform gauze being placed in the middle ear through the canal. The external wound was entirely healed in one week, while the ear healed rapidly under light packing and swabs of argyrol.

The patient has progressed very rapidly. The mental condition has cleared up, vertigo and nystagmus have disappeared, but the facial condition has not as yet shown much improvement, although electricity and strychnine are being employed.

Selected Articles

FIRST DEATH FROM CHLOROFORM AT TORONTO GENERAL HOSPITAL

(By Courtesy of Dr. Joseph Graham, Toronto.)

We have been favored by Dr. Joseph Graham with the only copy still in existence of *The Evening Leader,* Toronto, dated "Thursday, January 15th, 1863." It gives an account of an "Important Medical Case," and "Inquiry Into a Death from Chloroform," being the first death from chloroform at Toronto General Hospital, and which occurred 47 years ago.

The article states:—

"Coroner Hallowell resumed the inquest yesterday at 12 o'clock in the General Hospital on the body of Richard Humphreys, who died on Tuesday while under the influence of chloroform. This being the second case of the kind that has occurred in Canada, much interest was taken in the investigation by the medical gentlemen of this city. It will be seen from the detailed evidence adduced that the medical staff of the Hospital have endeavored to present the case before the public in as clear a manner as possible, in order to show that the utmost care was taken to prevent accident. It speaks very highly for the abilities of the medical men attending the institution that, although chloroform has been administered in nearly 2,000 instances, this is the first case where the patient died from its effects. We are certain the public will fully exonerate the medical gentlemen from any blame, as it is obvious the greatest care and skill were exercised in this as in all other cases which have come under their treatment. The importance of the case, in a medical point of view, will be sufficient justification for producing the evidence *in extenso,* as follows:

Edward Fawcett, a patient, was sworn, and said: I have

known deceased, Richard Humphreys, ever since he came into hospital, about one week ago. He had made up his mind, by the recommendation of the medical men comprising the staff of the Toronto General Hospital, to undergo an operation. In all respects he appeared to be a hale, strong, hearty man. He had made up his mind, and desired to be placed under the influence of chloroform, previous to being operated on. He remarked, at the same time, that he should go to the operating theatre, and was prepared to die, as all should be who got operated on under the influence of chloroform. I asked him "if he had any disease that would disqualify him from taking it." He said, "No, none whatever." I mentioned such diseases as I knew, as "disease of the heart." I told him "I had taken chloroform myself," and described the sensations, and encouraged him in his determination to take it. Up to the day of the operation he was in perfect health, and appeared calm and collected when he left the ward about 1 p.m. on Saturday, the 13th inst. This was the last I saw of him.

Maria Humphreys, wife of deceased, sworn and said: Up to the time of my husband's death he had apparently been a healthy man, but did not enjoy a strong constitution. He was subject to become faint on hearing any sudden news, and when bathing the tumor, which was the subject of operation, he also was disposed to faintness. He told me that no one should take chloroform unless he made up his mind to the worst, hoping for the best. He was anxious at the same time to take chloroform, in which desire I entirely agreed. I had a presentiment that something might happen to my husband in the hospital, and at the time I objected to his going there; but my scruples were finally overcome, and under all the circumstances I am satisfied that everything was done for the best. Mrs. Humphreys further stated that her late husband was very irritable at times, and that unless he had been restrained by a higher power he would have been very violent. She moreover says that, while in London, England, he was treated for some affection of the head, and that arsenic was prescribed for the complaint.

Edward M. Hodder, M.D., sworn and said—I first saw the patient, Richard Humphreys, last spring whilst waiting for the train at Dundas station. I examined the tumor of which he complained, and prescribed for it. I heard or saw nothing

more of him until a fortnight ago. He then called at my house, bringing a letter from Dr. Rutherford, of Dundas. I made another examination and found the tumor had increased to nearly double its former size. Finding that the previous treatment had been entirely inefficacious, I recommended its removal, to which he was willing to submit. He returned to Dundas to make the necessary arrangements and returned to the hospital on the 6th of January inst. He appeared to enjoy good health in every respect, the tumor being the only disease, and for the removal of which he appeared most anxious. I told him that the disease was non-malignant, consequently there was no immediate hurry in removing it. In reply he stated " that as soon as he attempted to walk, it became painful and inflamed; and he wished the operation performed at once." A consultation was called for Tuesday, the 13th inst., when Drs. Bovell, Beaumont, King, Lawlor and myself met; and it was our unanimous opinion that the removal of the tumor was the only practice to be thought of or adopted. The requisite preparations having been made, he was placed on the operating table at 1.30 p.m., and chloroform administered by Dr. Bovell in the ordinary way, while Dr. Gardiner kept his finger on the pulse. After a short time the ordinary struggle ensued, with the wild, incoherent talking which generally accompanies the administration of chloroform. I now commenced the operation, and almost immediately afterward the pulse ceased, the face became pale, and respiration ceased. The ordinary appliances were immediately brought into requisition, viz., galvanic battery, stimulants, etc. Respiration returned for a short time, but was stertorious and labored. In the meantime the tumor was removed. There was no bleeding, even from the open mouths of the divided vessels. A ligature was applied in the event of his coming to, but it was useless. Every means that could be devised was most assiduously adopted by the medical men present, but all to no purpose.

To the Coroner—I have been connected with the hospital about ten years. In all capital operations it has been my invariable habit to use chloroform, except where it is contra-indicated by organic diseases, operations on the mouth, or when the patient expresses an objection to its use. The employment of chloroform is generally adopted by the members of the medical staff of the hospital in capital operations. We generally use Duncan and

Flockhart's chloroform in its undiluted state, by inhalation. I believe that chloroform has probably been administered in at least 1,000 to 2,000 cases since its first introduction as an anasthetic, and this is the first death that has occurred under its influence in the hospital.

To a Juror—There was nothing of any kind to lead me to suspect the existence of organic disease in the case of the deceased before the operation. I have also used it extensively in private practice, but with no unfavorable result. I ought to have said that ether has also been employed with a similar view, previous to the introduction of chloroform, which has now taken its place entirely, with a very few exceptions.

William R. Beaumont, M.D., sworn and said:—I met Dr. Hodder and some other medical men, in consultation. We agreed that it was a case for operation, and I thought there was no chance of his getting rid of the disease, except by excision, to which he readily assented. He appeared to get under the influence of chloroform as readily as other patients. After Dr. Hodder commenced the operation, Dr. Bovell made an exclamation to the effect that the patient's face was in danger from chloroform. I was assisting Dr. Hodder at the operation, and left my post for a moment to examine the patient, which had a death-like pallor. The pupils of both eyes were greatly dilated. I immediately gave a pair of hooked forceps, I believe, to Dr. Bovell, to draw forward the tongue, in order to prevent the closing of the passage into the wind-pipe. Electricity was immediately employed, and Dr. Bovell and myself produced artificial respiration by compressing the walls of the chest, and obtaining that with allowing its dilatation. In a very short time there seemed a slight change—toward resuscitation—indicated by contraction of the pupils, and it was thought by some of the medical men present that there was some slight return of respiration, the veins of the neck were turpid, and one was opened by Dr. Gardiner. Everything proved unavailing.

To the Coroner—I believe on this occasion a much smaller quantity of chloroform was given, than I myself have given in private practice, in order to produce insensibility. Having been in the practice of employing ether, chloroform and chloric ether, in the hospital and in private practice, ever since their first introduction, 15 or 16 years ago, this is the first instance of

death resulting from their use that has come within my knowledge, in this hospital or my own private practice, and the first one of a patient dying on the operating table. I might mention that scarcely a month passes without death being recorded from the employment of chloroform in some of the large hospitals in Great Britain or France.

Drs. King and Lawlor made a *post mortem* examination of the body and gave as their opinion that "deceased came to his death from cerebral apoplexy, occasioned by inhalations of chloroform."

Drs. King and Lawlor further testified: We were both present while Dr. Bovell administered the chloroform, amounting to about two drachms; it was given by inhalation in the usual way. Every care was taken in its administration, and the means and appliances subsequently employed were done with much care, skill and judgment. We have heard the evidence of Drs. Hodder and Beaumont, in which we entirely concur. We may, however, state that after the pallid appearance of countenance, as stated in Dr. Beaumont's evidence, there was turpidity of countenance when he again began to breathe. At that period Dr. Bovell told Dr. Hodder to go on with the operation. Stimulants were attempted to be given by the mouth, but the power of deglutition was gone; after that he became deadly pale, and breathing ceased.

James Bovell, M.D., sworn and said—I was requested by Dr. Hodder (on the 13th inst.) to administer chloroform to the patient, Richard Humphreys, on whom he was about to operate. There seemed to be nothing in his appearance to contra-indicate its use. His pulse was regular, strong, though quickened by the excitement produced by the advent of an operation. I used the usual means adopted in such cases, viz.: the towel, conically folded, and wetted it with about two drachms of chloroform. Shortly after the inhalation, I noticed that the extensor muscles of the upper and lower extremity were convulsed, as well as the muscles of the neck. This state passed away, and he seemed to be breathing quietly under the influence of the agent. At this time Dr. Hodder commenced the operation. Consciousness seemed to be about returning. The towel was again wetted with about ½ drachm, and again applied as before. Almost immediately after this spasmodic twitching of the mouth came on, the

countenance being exceedingly pale. I withdrew the towel and ammonia was applied to the nostrils, soon after which respiration seemed to return, although in a labored degree. I then called to Dr. Hodder and said—"Finish your operation quickly." The respiration almost immediately after this ceased again, attended by spasms of the muscles of the face and rolling of the eye-balls, the face becoming almost immediately turpid, the veins about the neck being very full and distended. Cold water was dashed on the face. I then begged Dr. Gardiner to open the jugular vein, which he at once did, proposing thereby to relieve the pressure from the brain. I applied the poles from the galvanic battery to the nape of the neck, bringing it round toward the point to influence the phrenic nerve, while the other pole was applied to the pit of the stomach, thus succeeding in keeping up artificial respiration for some time. I should have observed that this was resorted to after Marshall Hall's system of resuscitation in such cases had failed. The whole, however, proved ineffectual. He did not lose more than two ounces of blood from the jugular vein.

To the Coroner—I considered that the patient was in all respects a fit subject for chloroform, being also much more healthy than many to whom it is without hesitation administered. I was present at the *post mortem* examination. I consider that it was thoroughly and most efficiently performed. I think that the result of the operation showed that the man suffered from cerebral apoplexy, particularly as there was an absence of any of the chief *post mortem* appearances which are observable as fatal effects of chloroform, viz.: the lungs were full of air, free from congestion, crepitating freely under the fingers. The heart was not flacid. On the contrary, its walls were very firm; the blood was fluid and dark colored, as met with in poisoning by chloroform—the brain was full of blood, the sinuses being distended, the superficial veins between the convolutions full, and the brain matter deeply ingested. I think that death resulted from the direct effect of chloroform, producing apoplexy, to which he appears to have been pre-disposed.

Henry Wright, M.D., and William T. Aikins, M.D., sworn and said:—We have heard the evidence that has been adduced in the case of the late Richard Humphreys, together with the result of the *post mortem* examination, and are distinctly of opinion

that every means were used to resuscitate the patient, hitherto recommended in such cases, and that the employment of chloroform was justified in this case by the appearance of the patient, notwithstanding the unfavorable result, and that no blame is attachable to any party concerned, the chloroform appearing to have been administered with the usual precautions, and the first unfavorable indications promptly met and acted upon.

Dr. Gardiner, sworn and said: I have heard the evidence of the medical men that have passed and corroborate it in all respects. In addition to which I have to say that from my position in the hospital I have been in the habit of giving it many hundreds of times. I could not see any objecton to giving it in this case, it having been administered in all cases, organically diseased or otherwise. In fact I am not prepared to say under what circumstances we are to deny the patient the use of chloroform. That used on the late occasion was procured from a wholesale house in New York, and has been frequently used both in and out of hospital, with no bad results previous to the death of R. Humphreys.

Geo. L. Truax, student of medicine, Victoria College, sworn and said: I saw the operation performed by Dr. Hodder and the chloroform given by Dr. Bovell. I have heard all the evidence and have nothing to add. All the care, attention and kindness that could be shown was given by the medical men and those in attendance.

In the statement of the previous witness we entirely concur: Miss McLaughlin, Victoria College; R. M. Hanly, Toronto School of Medicine; Frederick Jebb, medical student, Victoria College; G. F. McManus, medical student, Victoria College; Wm. Coburn, medical student, Victoria College; Henry Strange, medical student, Victoria College.

The jury was composed of six men from amongst the intelligent patients in the hospital and six from the neighborhood, who, after due deliberation, returned as their verdict that "deceased came to his death from apoplexy, induced by chloroform, which we believe, from the evidence, was properly administered, and that the best means were adopted for his resuscitation."

Canadian Journal of Medicine and Surgery

Editor:
J. J. Cassidy, M.D.
45 Bloor St. E., Toronto

Managing Editor:
W. A. Young, M.D., L.R.C.P., Lond.
145 College St., Toronto

Surgery:
N. A. Powell, M.D., C.M., Professor of Medical Jurisprudence, Toronto University; Senior Assistant in charge, Emergency Department, Toronto General Hospital; J. F. W. Ross, M.D., Professor of Gynecology, University of Toronto; Gynecologist, Toronto General Hospital.

Clinical Surgery:
Alex. Primrose, M.B., C.M., Edinburgh University; Associate Professor of Clinical Surgery, Toronto University; Secretary Medical Faculty, Toronto University; Surgeon Toronto General Hospital; and Herbert A. Bruce, M.D., F.R.C.S., Eng., Surgeon, Toronto General Hospital.

Orthopedic Surgery:
B. E. McKenzie, B.A., M.D., Toronto; Surgeon to the Toronto Orthopedic Hospital; ex-President of the American Orthopedic Association; and H. P. H. Galloway, M.D., Orthopedic Surgeon, Winnipeg General Hospital; Lecturer in Orthopedic Surgery, Manitoba Medical College; Member of The Medical Orthopedic Association.

Militia and Naval Medical Services and Ambulance:
J. T. Fotheringham, M.D., Lieutenant-Colonel, Army Medical Corps, Associate Professor of Medicine and Clinical Medicine, University of Toronto; Associate Collaborator Chas J. Copp, M.D., C.M., Hon. Sec. Provincial Council of Ontario, St. John Ambulance Association.

Medical Jurisprudence and Toxicology:
Arthur Jukes Johnson, M.B., M.R.C.S., Eng., Coroner for the City of Toronto; Surgeon Toronto Railway Co., Toronto; W. A. Young, M.D., L.R.C.P., Lond., Ex-President of the American Medical Editors' Association; Associate Coroner, City of Toronto.

Physiotherapy:
Chas. R. Dickson, M.D., C.M., Queen's University; M.D., University of the City of New York; Electrologist Toronto General Hospital, Hospital for Sick Children and St. Michael's Hospital.

Pharmacology and Therapeutics:
A. J. Harrington, M.D., M.R.C.S., Eng., Toronto.

Pediatrics:
Allen Baines, M.D., Toronto; Associate Professor Pediatrics, University of Toronto; Physician, Hospital for Sick Children; A. R. Gordon, M.D., Toronto; Senior Medical Assistant, Toronto General Hospital; Helen MacMurchy, M.D., Toronto.

Medicine:
J. J. Cassidy, M.D., Toronto, ex-Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; W. J. Wilson, M.D., Toronto, Physician, Toronto Western Hospital; and Dr. J. H. Elliott, ex-Medical Superintendent, Gravenhurst Sanatorium, Ont.; Associate Medicine and Clinical Medicine, University of Toronto; Senior Medical Assistant, St. Michael's Hospital.

Clinical Medicine:
Alexander McPhedran, M.D., Professor of Medicine and Clinical Medicine, Toronto University; Physician, Toronto General Hospital; Lewellys F. Barker, M.D., Professor of Medicine, Johns Hopkins University, Baltimore, Md. H. B. Anderson, M.D., Toronto; Associate Professor of Clinical Medicine, University of Toronto; Physician, St. Michael's Hospital.

Bacteriology:
J. G. Fitzgerald, M.D., Lecturer in Bacteriology, University of Toronto.

Mental and Nervous Diseases:
N. H. Beemer, M.D., Mimico Insane Asylum. Campbell Meyers, M.D., M.R.C.S., L.R.C.P. (London, Eng.), Private Hospital, Deer Park, Toronto.

Gynecology and Obstetrics:
Geo. T. McKeough, M.D., M.R.C.S., Eng., Chatham, Ont.; and C. F. Moore, M.D., Toronto.

Pathology:
W. H. Pepler, M.D., C.M., Surgeon Canadian Pacific R.R., Toronto; Junior Medical Assistant, St. Michael's Hospital; and J. J. Mackenzie, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology:
J. M. MacCallum, M.D., Toronto, Senior Assistant Eye Department, Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Nose, Throat and Ear:
Percy G. Goldsmith, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb; Senior Assistant Ear, Nose and Throat Department, Toronto General Hospital.

Dermatology:
D. King Smith, M.B., Tor., Toronto; Demonstrator in Pathology, Toronto General Hospital.

Address all Communications, Correspondence, Books, Matter regarding Advertising, and make all Cheques, Drafts and Post-Office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

Reprints supplied Authors at Cost.

Editorials

UNUSUAL CAUSES OF INTESTINAL OBSTRUCTION

Among the more uncommon causes of intestinal obstruction may be mentioned compression due to a tumor of a neighboring organ, or to a neighboring coil of bowel filled with hard feces, or to old peritonitic adhesions. The enlargement of a neighboring tumor may cause kinking of the large or small intestine. Thus, in a case observed by ourselves, obstruction of the ascending colon near the cecum arose from the increasing pressure of a hydatid tumor, which had probably survived there for an indefinite number of years.

An unusual form of intestinal obstruction, arising from inflammatory tumefaction, was brought to the notice of the clinic to the profession of the Toronto General Hospital, Feb. 22nd, 1911, by Dr. A. Primrose. The case had been seen in consultation, and the history showed that the symptoms had developed slowly. The pain, which was at first slight and appeared at long intervals, was attributed to digestive disturbance. Constipation was the most troublesome symptom, and the bowels did not act without medicine. Finally the bowels ceased to act, and fecal vomiting set in. On examination of the abdomen a tumor could be felt in the left iliac region, apparently implicating the sigmoid colon.

An examination, per rectum, revealed the fact that a large tumor occupied the pelvis and apparently surrounded the rectum and extended up, involving the lower sigmoid. The patient was removed to the Toronto General Hospital, and there, a median incision having been made, the tumor was found occupying the pelvis, and in its midst the rectum was imbedded. There was complete obstruction, so that it was impossible to pass a bougie, nor could one inject fluid through the obstructed bowel. The appendix was found to be the seat of chronic inflammatory trouble with adhesions, and its tip was adherent to the tumor in the pelvis. It was impossible to remove the growth, but a portion was excised for histological examination, and colostomy was performed on the left side, the sigmoid being brought out through an incision over the left iliac region and a Paul's tube placed in each end of the divided colon. It was impossible to perform a colostomy in the ordinary way, as there was no sigmoid mesentery. It was surmised that the tumor might be malignant, but the pathologist who examined the tissue removed pronounced it to be purely inflammatory in character. After the lapse of six weeks the pelvic tumor had diminished perceptibly in size, and it was possible to pass a number 14 catheter through the bowel, where formerly complete obstruction had existed. Two months and a half after the original operation, it was found that large rectal bougies could be passed through the lower sigmoid and rectum, and it was therefore considered possible to close the colostomy opening. This was

done by opening the abdomen and performing an end to end anastomosis of the divided portions of the colon.

Dr. Primrose mentioned three other cases of a similar character, to which his attention had been drawn. In one of them, an effort towards a natural form of cure had occurred through the establishment of a fecal fistula. After the inflammatory material which obstructed the bowel had disappeared, it was possible to close the fistula by operation.

In these four cases, tumors, which might, from their histories, have been considered to be of a malignant character, and which, through continued pressure, caused obstruction of the intestines, were proved, by their subsequent behavior, to be of an inflammatory character. The disappearance of the inflammatory material from the neighborhood of the intestine, simply as an outcome of the re-establishment of suitable intestinal evacuation, is worthy of note. J. J. C.

CHRONIC CARRIERS OF TYPHOID FEVER

Convalescents from typhoid fever, for the most part, cease to eliminate Eberth's bacilli by their stools or urine during the three weeks ensuing after the fall of febrile temperature; but it is now calculated by experts that about five per cent. of the cases continue to excrete their bacilli for months and years, and thus become chronic carriers of typhoid infection.

To acquire definite information as to the existence of this peculiar characteristic in certain typhoid convalescents, bacteriological examinations of the urine and feces of all typhoid fever cases should be made prior to discharge. In hospital practice this precaution is easily attended to; in private practice it is more difficult. However, after a typhoid outbreak in any locality, in which the agency of a chronic carrier of Eberth's bacilli is suspected, a complete investigation should be made, including researches into every case of typhoid fever, old or recent, in the neighborhood, with the history of each case; possible modes of infection and the occupations of patients; sanitary condition of the house; disinfection of stools and urine during illness; possible contamination of drinking water, milk or other foods, etc.

The relations existing between the different cases may direct suspicion to certain individuals, and the subsequent analyses of their urine and feces may lead to the discovery of a chronic carrier of the bacilli of Eberth.

The chronic carrier may be an aged person, who had typhoid fever in youth. Gregg reported (Public Health and Marine Hospital Service of the United States, *Hygienic Bulletin* No. 52, 1909) the case of a woman, who transmitted typhoid fever fifty-two years after she had had that disease. In *Bulletin Sanitaire,* Vol. 10, Dr. Arthur Bernier, Bacteriologist of the Provincial Board of Health of Quebec, reports eleven cases of typhoid fever which occurred in persons living in the same house, or its immediate

neighborhood, all of which were traced to infection of food by one chronic carrier of Eberth's bacilli, who continued to live in this house for several years.

Supposing that a chronic carrier of Eberth's bacilli has been discovered, the suppression of his infection is urgently demanded. Unfortunately, however, there is no process of treatment known to medicine or surgery by which such a result can be certainly obtained.

The efficacy of the soured milk treatment rests on the fact that lactic acid bacilli have been proved to be destructive to Eberth's bacilli, in a test tube, in five or six days. Similarly, it is thought that lactic acid bacilli may destroy Eberth's bacilli in the intestinal tube. Were the Eberth's bacilli of the chronic carrier limited to the intestines, the soured milk treatment might prove effective—but, as in such cases, Eberth's bacilli are most frequently present in the gall-bladder—this treatment could give no permanent result.

Salicylate of sodium, given in doses of from three to five grammes, during a period of six months, has proved successful in one out of three cases. Urotropine has given but uncertain results, even in cases in which Eberth's bacilli were present only in the urine. Surgical removal of the gall-bladder has not proved successful, either owing to the gravity of the operation, or because excretion of Eberth's bacilli has continued in persons upon whom that operation had been performed.

As chronic carriers of typhoid infection may be

in apparently good health, and as they are able to work, they cannot be condemned to isolation for the rest of their lives. As far as it is possible to prevent it, they should not be allowed to have anything to do with the preparation of food, milking of cows or handling of milk; but, as they cannot be constantly watched, restrictions on their methods of gaining a living must be left to their own sense of what is right.

They should be taught to wash their hands after defecation or urination. Their stools and urine should be disinfected, and their linen should be disinfected, so as to lessen, in some measure, the danger of infecting persons living in the same household with them. J. J. C.

THE ONTARIO MILK ACT

A YEAR ago we commented favorably on the Report of the Ontario Milk Commission, in which expression was given to medical opinion applied to the production, handling and storage of the most important of all foods. It is now pleasing to record that the recommendations of that report are about to be realized, as they have been embodied in The Ontario Milk Act, introduced into the Legislature by the Hon. J. S. Duff, Minister of Agriculture. The most important recommendation in the Report of the Ontario Milk Commission was one, providing that each Municipal Council should have power to look

after its own milk supply. Each municipality was to be given freedom to inspect the dairies from which its milk supply was drawn, at every stage, from the cow to the consumer, with power to exclude any milk believed to be contaminated. In the Ontario Milk Act the Council of every municipality is authorized to pass by-laws regulating milk produced for sale, offered for sale, or sold within such municipality as to

(a) The care of cows producing milk for sale for domestic consumption;
(b) The cleanliness, ventilation and sanitary conditions of the places in which cows are kept or milked, or in which milk is stored;
(c) The water supplied to cows;
(d) The care, cleansing and type of all utensils used in handling milk, whether by producers, carriers or vendors;
(e) The proper care, storage, transportation and distribution of milk by producers, carriers or vendors;
(f) The making of bacteriological tests as a guide to the wholesomeness of milk offered for sale by any producer, carrier or vendor;
(g) Such other matters regarding the production, care, transportation or sale of milk, as the Municipal Council may consider necessary; and upon such regulations being approved, in writing, by the Minister of Agriculture, the same shall apply to all milk produced for sale, offered for sale, or sold within such municipality.

Municipal Councils are also authorized to enact by-laws, regulating the granting of licenses to producers and to vendors to sell milk, and they shall have power to refuse or cancel such licenses.

Municipal Councils are also authorized to enact by-laws, fixing the standard for butter-fat and total solids of milk, but it is provided that "*No milk shall be sold for human consumption which contains less than twelve per cent. of solids, of which three per cent. shall be butter-fat.*"

Provisions are made against adulteration of milk.

A Municipal Council is authorized to appoint an inspector for the enforcement of the Act, who shall have the right to inspect the premises of every vendor licensed to sell milk within the municipality for which he is inspector.

An inspector shall also have the right of entrance to the premises, *no matter where located,* of every person producing milk for sale or consumption within the municipality for which he is inspector, of inspecting the same and of taking for examination and having tested samples of milk produced therein, and of the water supplied to cows or used in cleansing dairy utensils.

Cans, bottles or other utensils used in the distribution of milk shall not be used for any other purpose, and they must be thoroughly cleansed before being used again.

No milk shall be sold from any cow which, upon examination by a certified veterinarian, shall be declared to be suffering from tuberculosis of the udder,

or the milk of which contains tubercle bacilli, or which is known to have splenic fever or other disease liable to render milk from such a cow a menace to the public health.

Persons suffering from diphtheria, scarlet fever, typhoid fever, erysipelas, smallpox, anthrax, or any infectious disease of the skin, or persons who have, knowingly, within a time prescribed by the regulations of the Provincial Board of Health, been exposed to such diseases, shall not be allowed to work or assist in the production, transportation, or handling of milk, and the sale of milk produced or handled under such circumstances may be prohibited by the inspector.

A Municipal Council is authorized to establish and maintain milk depots, in order to furnish a special supply of milk to infants.

The term "Certified Milk" is protected by incorporating the conditions, which must be complied with before it can be used, and by providing that the existence of these conditions in the product of a dairy must be certified to, either by the Medical Health Officer or an incorporated society of medical practitioners.

It shall not be lawful to apply the word "pasteurized" to any milk unless all portions have been subjected for at least twenty and not more than thirty minutes to a temperature of not less than 140 and not more than 145 degrees Fahrenheit, and then at once cooled to 45 degrees Fahrenheit, or under, and kept at that temperature until delivered to the

consumer. The process of pasteurization is to be subject to the inspection of the Medical Health Officer or his inspector; provided always that pasteurized milk shall in all other respects be subject to all the terms and conditions of this Act. This last section, respecting pasteurization, shall not come into force until July 1, 1911. J. J. C.

DOCTOR! DOES THIS MEAN YOU?

If half the sanitary and sensible precepts set down by the new Medical Health Officer ever become law, Toronto will add the degree of "spotless town" to its alphabet of other virtues. We all remember that trite saying, "Rome was not built in a day," and do not look to the "Powers that be" to exercise undue haste, so at present the citizens of this Burg belong to that noble band immortalized as, "They also serve who stand and wait." We have gazed with sorrow on the poor man's "bread line" in days past—we citizens of Toronto are of it. We have read in an inspired Book of a man named Lazarus longing for water to cool his parched tongue. We share his longing. We go out for exercise and air and the shades of "Muddy York" encompass our feet, while men lecture in little halls to little audiences on "Good Roads." We go out to enlighten our minds and are shown limelight views of our slums "Worse than any in old London, or Scotland in the eighteenth century."

We find dirty milk and fever waltzing together into dozens of our homes, and not an empty bed in our Hospital for Contagious Diseases. They tell us the banana man still dreams sweetly on his wagon and offers his "Ten a doz." to the school children in the morning. This all in Toronto, and other grievances, as the catalogues say, "Too numerous to mention."

Let us extend our sympathy to the M. H. O. in the weary task that lies before him.

It must, however, afford the medical men not a little surprise to learn that they are on the list of things, to be attended to also. The Medical Health Officer has laid down to them (quite properly) some rules in regard to the Isolation Hospital, and also to be observed in dealing with patients afflicted with communicable diseases. After some of the usual regulations, a little rule sits up and looks the doctors in the face. It says:

"Don't kiss a patient or allow a patient to kiss you " ! ! We have reached the old age of youth, and the youth of old age, and we never knew it was the custom of Toronto physicians to indulge in such a waste of precious time.

Does not the M. H. O. realize that this is a materialistic age, sentiment surely is a sacred thing, apart entirely from the day's work; also perchance we physicians still regard each other as mostly gentlemen, certainly not as a generation of fools.

W. A. Y.

THE ACADEMY OF MEDICINE

THE sixth stated meeting of the Academy of Medicine, Toronto, was held in the new Academy Building on Tuesday, March 7th. This was the first meeting to be held in the new building, No. 13 Queen's Park. The programme consisted of a symposium on "The Preparation and After Treatment of Surgical Cases." The subject was introduced by Dr. George A. Bingham, of Toronto. Drs. William Burt, of Paris, Ingersoll Olmsted, of Hamilton, and W. G. Anglin, of Kingston, were the other speakers. The evening's programme was most enjoyable, the discussions being decidedly lively. Dr. A. A. MacDonald, President of the Academy, was in the chair, with Dr. Harley Smith on his left as Honorary Secretary. The attendance of fellows was exceedingly good, and many were the complimentary remarks regarding the Academy's new Headquarters.

Obituary

ROBERT LOVELL GIBSON

Born (Montreal) October 5th, 1838.
Died (Toronto) February 18, 1911.

Among the members of the medical profession, those who knew Mr. Gibson regret profoundly his loss. To meet him was



ROBERT LOVELL GIBSON.

always a pleasure, so cordial and so sincere was he in all his business dealings. To know him as a friend was indeed a privilege, broad-minded and wise, cherishing high ideals, yet ever enjoying life, embodying his ideas of men and things in a quaintly humorous manner, but ever devoid of sting, was a characteristic which made him of that small company of friends who ever live on in one's thoughts and heart.

Mr. Gibson's earlier life was spent in editorial work. He

was one time editor of the *Montreal News* and assistant editor of the *Canadian Monthly Magazine,* founded in 1872. He was also correspondent in Montreal for a New York paper. Mr. Gibson was associated with the firm of John Lovell & Sons, publishers. He did detail work for Messrs. Reed & Carnrick of Jersey City. In 1885 he moved to Toronto to succeed, as their agent, Mr. H. P. Gisborne, who was drowned in Toronto Bay the same year. To Reed & Carnrick's ageney Mr. Gibson added several important agencies, and was at the time of his death well known. He was well known as the sole Canadian representative for Duncan & Flockhart of Edinburgh, Scotland, and the Arlington Chemical Co. of Yonkers, N.Y.

We take this opportunity to extend to Mr. Gibson's family our very sincere sympathy in their irreparable loss.

News of the Month

ONTARIO MEDICAL ASSOCIATION

The 30th Annual Meeting of the Ontario Medical Association will be held in Niagara Falls, Ont., on May 30th, 31st and June 1st. The spacious rooms of the Clifton House have been secured for the meetings, and from the appearance of the provisional programme, which has just come to hand, the attendance this year should surpass all previous records.

The session will open on Tuesday morning, May 30th, with registration of members at the Secretary's desk. At 2 p.m. the President delivers his address, which is followed by a symposium on appendicitis. The pathological aspect is discussed by N. T. McLaurin, Toronto, the medical treatment by R. D. Rudolf and the surgical by H. A. Bruce, Toronto. Following this is the address in medicine delivered by a Canadian, T. B. Futcher, now Associate Professor of Medicine in Johns Hopkins, Baltimore.

8 P.M.—EVENING SESSION.

1. The Relation of Laboratory Work to Medicine.—Norman M. Harris, Professor of Bacteriology, University of Chicago.
2. Public and Professional Aspects of the Pneumonia Question. —William Charles White, Medical Director Tuberculosis League, Pittsburg, Penn.

9 p.m.—Reception in Clifton Hotel Ball Room, tendered to the members of the Association by the President, H. R. Cosgrain.

WEDNESDAY, MAY 31ST.—MORNING SESSION.

Surgical Section—9 a.m.

1. A Paper.—Robert Lucy, Guelph.
2. Surgical Diagnosis of Lesions of Kidney and Bladder.—J. K. McGregor, Hamilton.
3. Open Method of Treating Fractures.—F. N. G. Starr, Toronto.
4. A Paper.—A. Primrose, Professor of Clinical Surgery, Toronto.

5. A Paper.—E. Archibald, Montreal.
6. Thoracic Surgery.—E. Von Eberts, Montreal.
7. Some Interesting Cases.—H. S. MacKendricks, Galt.

Medical Section—9 a.m.

1. Bacteriology of Tuberculosis.—A. H. Caulfield, Gravenhurst.
2. A Paper.—John McRae, Montreal.
3. The Present Status of Radium Therapy.—W. H. B. Aikins, Toronto.
4. A Paper.—L. E. Roundtree, Baltimore.

Gynecology, Obstetrics and Pediatrics Section—9 a.m.

1. Post-Partum Hemorrhage.—Robert Ferguson, London.
2. Non-Surgical Treatment of Tuberculosis Adenitis.—Campbell Laidlaw, Ottawa.
3. Use of Cold Baths in Treatment of Diseases of Children.—James Newell, Watford, Ont.
 Discussion led by S. McCoy, St. Catharines.
4. Differential Diagnosis of Right-sided Salpingitis and Appendicitis. When to Operate in Salpingitis. When to Operate in Appendicitis.—S. M. Hay, Toronto.
5. Diagnosis of Extra-Uterine Pregnancy.—James McLeod, Buffalo.
 Discussion led by Dr. Goldsborough, Buffalo, N. Y.

Section of Hygiene and Military Sanitation—9 a.m.

1. Municipal Control of Milk Supply.—Charles J. Hastings, M. H. O., Toronto.
2. A Paper.—John Phillips, Associate Professor of Medicine, Western Reserve University, Cleveland.
3. A Paper.—J. Heurner Mullin, Hamilton.
4. A Paper—Major Lorne Drum, R. A. M. C., General Secretary Canadian Public Health Association.

Wednesday Afternoon—General Session, 2 p.m.

1. Address.—George W. Crile, Cleveland.
2. Surgical Diseases of the Umbilicus.—Thomas Cullen, Assistant Professor Johns Hopkins, Baltimore.

4 p.m.—Business Session.

WEDNESDAY EVENING.

Annual Dinner, Clifton Hotel Banquet Hall.

THURSDAY MORNING, JUNE 1ST.

Surgical Section—9 a.m.

1. A Paper.—H. R. Elliott, Niagara Falls.
2. Two Cases of Phlegmonous Enteritis.—L. K. Cockburn, Hamilton.
3. A Paper.—C. T. McKeough, Chatham.
4. Fractures.—Walter McKeown, Toronto.
5. A Paper.—Hadley Williams, London.
6. A Paper.—Ingersoll Olmsted, Hamilton.
7. A Paper.—James H. McGerry, Niagara Falls.

Medical Section—9 a.m.

1. A Paper.—F. C. Neal, Peterborough.
2. Aortitis.—F. Arnold Clarkson, Toronto.
3. Serum Treatment of Pneumonia.—James H. Duncan, Chatham.
4. Our Results With "606".—R. R. Campbell, Montreal.

Gynecological Section—9 a.m.

1. A Paper.—A. B. Welford, Woodstock.
2. Infantile Eczema.—W. H. Moorehouse, London.
3. A Paper.—A. T. Shillington, Ottawa.
4. Typhoid in Child, Complicated by Thrombosis of Femoral Artery.—Henry T. Machell, Toronto.
5. Twisted Pedicle of Ovarian Cyst.—E. R. Secord, Brantford.
6. A Paper.—Charles Carter, Hamilton.
7. Cesarean Section, When to Operate.—Frederick Fenton, Toronto.
8. Phlebitis Following Pregnancy.—J. L. Hauley, Almonte.

Discussion opened by Adam Wright and A. T. Shillington.

Section Eye, Ear, Nose and Throat—9 a.m.

1. A Paper.—T. Woodruff, Chicago.
2. A Paper.—Dr. MacPherson, New York.
3. A Paper.—D. G. Wishart, Toronto.

THURSDAY AFTERNOON—GENERAL SESSION, 2 P.M.

1. Address in Surgery.—A. E. Garrow, Assistant Professor of Surgery, McGill University, Montreal.
2. Symposium of Anterior Poliomyelitis (*a*) Epidemology.—Robert Parry, Hamilton. (*b*) Surgical Treatment.—John Parry, Hamilton.

Discussion led by A. Moir, Dunnville.

F. ARNOLD CLARKSON.

A PUBLIC HEALTH EXHIBIT

A public health exhibit, under the auspices of the Provincial Board of Health of Ontario, will be a feature of the Canadian National Exhibition to be held in the City of Toronto for two weeks beginning Saturday, August 26th, of this year This exhibit will consist of public health equipment of every kind, and will include also a varied assortment of apparatus, etc., relating to prevention of disease.

In addition, a Lecture Room is being provided where lectures, demonstrations, etc., will be given daily. Interest in these lectures will be greatly enhanced by the use of an excellent reflectoscope and several hundred lantern slides.

Firms wishing to contribute to the exhibit are reminded that shipment should be made so that exhibits will reach here *not later than August 20th.* Packages should be marked with the name of the firm and nature of the manufactures, and bear the following address: Dr. John W. S. McCullough, Educational Building, Canadian National Exhibition, Toronto, Canada.

When articles to be exhibited are not of home manufacture, it will be necessary for the exhibitor to ship such articles in bond. At the close of the Exhibition, if not exported, the goods may be sold and the duty then paid.

There will be no charge for space, etc. Intending exhibitors desiring further information will please communicate with John W. S. McCullough, M.D., Chief Health Officer of Ontario, Toronto, Canada.

ELEVENTH ANNUAL MEETING

The Canadian Association for the Prevention of Tuberculosis will hold its Eleventh Annual Meeting on Thursday and Friday, the 18th and 19th of May, in London, Ontario. As the sanatorium movement in Ontario has received much encouragement from the increased grants of the Provincial Government for such institutions, it is hoped that the splendid new Sanatorium at London will prove of special interest to the delegates. Papers and discussions by prominent men on the practical side of the tuberculosis question, will be the leading feature of the meetings, and it is hoped that a large number will attend. It is especially hoped to interest the various municipalities which are contemplating active work in this movement by the opportunity these meetings will afford of visiting the Queen Alexandra Sanatorium at London.

SANITARY BURIAL

The subject of a more sanitary method of the disposal of the dead is becoming one of public interest, especially during the last few years. Physicians especially realize how important it is that public sentiment be educated along different lines to those adopted up till the present in connection with the burial of the dead.

The practice of burying in churches or church yards is said to have been connected with the custom of praying for the dead, and it would appear that the earlier practice was burying in the church itself. "In England, about the year 750, spaces of ground adjoining the churches were carefully enclosed and solemnly consecrated and appropriated to the burial of those who had been entitled to attend divine service in those churches, and who now became entitled to render back into this place their remnants to earth, the common mother of mankind, without payment for the ground which they were to occupy or for the pious offices which solemnized the act of interment." (Lord Stowell.)

The medical profession will realize that the burial of the

dead in the earth, according to the old-fashioned methods, is nothing but an inheritance from the dark ages. It is true that quite a number of people favor cremation, and doubtless from the standpoint of sanitation there is much to recommend it. At the same time, cremation is naturally abhorrent to the great majority, as to blot out with fire the form that represents the life we love can never find acceptance in the hearts of the majority of people.

It is interesting to know that a company has been recently incorporated in Canada to acquire certain Canadian patent and copyright plans for the erection of Mausoleums to be constructed in different centres throughout the Dominion, in order to enable the dead to be buried in individual crypts, which are hermetically sealed with a marble slab and therefore air tight. We understand that the idea to be adopted is similar to that in use in many continental cities, perhaps particularly that adopted in Genoa, Italy, where tourists will find the most beautiful cemetery in the world. At the back of each crypt and opening into a pipe is a valve ensuring absolute ventilation. The valve opens on a pressure of one ounce and connects with an air-tight pipe running back of each row of crypts, which in turn connects with another air-tight pipe leading to a disinfecting plant within the structure and in a separate part thereof, passing through a solution of formaldehyde before reaching the atmospheric air. By this method it will at once be seen that any gases passing through this disinfecting plant are made harmless and pure by this process. In addition to this ventilation, each crypt in its construction slopes downward at the rear, and is connected with a drain pipe running into the ground underneath the structure through a bed of quick lime, thus further ensuring perfect disinfection.

We feel that the introduction into Canada of this method of the burial of the dead is a distinct step along sanitary lines, and it should not be long before it receives general adoption at the hands of the public.

The Physician's Library

Cystoscopy, As Adjuvant In Surgery. With An Atlas of Cystoscopic Views and Concomitant Text for Physicians and Students. By Staff-Surgeon Dr. O. Rumpel, Lecturer in Surgery at the University of Berlin. Only authorized English translation by P. W. Shedd, M.D., New York. With 85 illustrations on 36 plates and 22 textual figures. New York: Rebman & Company, 1123 Broadway.

The present volume should prove useful to anyone making a study of cystoscopy.

No branch of medicine has received so much assistance from the use of the cystoscope as has surgery. The work before us is copiously illustrated with drawings from the pen of Max Queisser and with 85 colored illustrations on 36 plates. F. N. G. S.

Anemia. By Geh. Obermidizinalrat Professor Dr. P. Ehrlich, Director of the Königl Institut für Experimentelle Therapie, Frankfurt-A.-M., and Dr. A. Lazarus, Professor of the University of Berlin-Charlottenburg. Part I. Volume I. Normal and Pathological Histology of the Blood. Second edition (enlarged and to a great extent rewritten). By Dr. A. Lazarus, Professor (Berlin), and Dr. O. Naegeli, Privat-Dozent (Zurich). Translated from the German by H. W. Armit, M.R.C.S., L.R.C.P. (London). With five illustrations in the text and five colored plates. Cloth, $4.00. New York: Rebman Company, 1123 Broadway.

This work deals with the clinical methods of blood examination, the morphology of the blood, including the making of films and the composition and methods of using the various stains and the normal and pathological histology of the blood. This part of the work is by Dr. A. Lazarus, while Dr. O. Naegeli treats of the normal histology and classification of the white blood corpuscles and their origin. He also describes the pathological forms and the cell granules.

Leucocytosis and leukemia each take a chapter. The work is

one of great interest, especially to those making blood examinations and workers in research laboratories.

Professor Ehrlich is a pioneer in this work, and although time may prove some of his opinions erroneous, yet his work will always be of interest as marking the early steps leading to a more exact knowledge of the structure, origin and functions of the various blood corpuscles. Professor Ehrlich does not depend on pallor of mucous membranes or skin for a diagnosis of anemia, but makes a careful microscopical examination and hemoglobin test of the blood.

To the student of hematology, or the medical practitioner who wishes to know something more of the blood, we can heartily recommend Dr. Ehrlich's work. M. J. W.

Induced Cell-Reproduction and Cancer. By Hugh Campbell Ross and John Westray Cropper. Philadelphia: P. Blakiston's Son & Co. Price, $4.50 net.

One does not know whether to be irritated or amused when reading this book. Its naiveté, however, is so immense that one ends by being amused.

The authors are undoubtedly indefatigable workers, the large number of photomicrographs indicate this, but rarely indeed have authors embarked so cheerfully upon the sea of cytological research with so little training. Some idea of their extraordinary opinions may be indicated by the fact that in summing up their observations upon the supposedly dividing lymphocytes, they state: "The nucleus does not vanish, it forms the spindle; the chromosomes are not derived from within the nucleus, but are formed from the normal Altmann granules which exist in the cytoplasm. The centrosomes are not mere dots at the poles of the spindle, but are derived from the nucleolus which has divided into two."

It is unnecessary to quote further, but the photomicrographs, which are not very good, sufficiently indicate that the authors were dealing with artefacts. In passing, one may note that photograph, Fig. 119, is quite certainly not the carcinomatous portion of the scirrhus of the breast, but the surface epithelium at the margin.

The authors' methods may lead to interesting discoveries, but certainly not in their hands. The book cannot be recommended.

J. J. M'K.

Treatise on Diseases of the Skin. For the Use of Advanced Students and Practitioners. By HENRY W. STELWAGON, M.D., Ph.D. Sixth edition, thoroughly revised. Philadelphia and London: W. B. Saunders Company. 1910.

As the author states, this work has now reached the sixth edition and is thoroughly revised. That alone seems sufficient evidence as to its popularity, but by a careful review one can readily understand why this book has had such a large sale, for it is essentially practical, and probably no work in dermatology goes more carefully into treatment, which must always appeal to the physician.

The illustrations are excellent and well selected, not only in reference to the rare dermatoses, but also of the commoner diseases.

D. V. S.

Diagnosis and Treatment of Diseases of Women. By HARRY STURGEON CROSSEN, M.D., Professor of Clinical Gynecology, Washington University; Gynecologist in Washington University Hospital and Director of the Gynecological Clinic; Gynecologist to St. Louis Mullanphy Hospital, to Missouri Baptist Sanitarium, to Bethesda Hospital and to the St. Louis City Hospitals; Formerly Superintendent of the St. Louis Female Hospital; Fellow of the American Gynecological Society, of the American Association of Obstetricians and Gynecologists, and of the Western Surgical and Gynecological Association; Ex-President of the St. Louis Obstetrical and Gynecological Society; Member of the American Medical Association, Missouri State Medical Association, St. Louis Medical Society, etc. Second edition, revised and enlarged, with seven hundred and forty-four engravings. St. Louis: The C. V. Mosby Company. 1910.

Dr. H. S. Crossen now presents the profession with a second edition of his important work as published but three years ago.

He has almost entirely rewritten the book, and it may be fairly termed a modern and up-to-date presentation of the diag-

nosis and treatment of diseases of women. He presents to his readers very clearly and in full detail "The foundation, facts and principles of gynecology," which of course underlie successful gynecologic work.

We find that he has added to his second edition two hundred pages of text and fifty original illustrations. He has amplified the index quite largely, and it now includes reference and cross-reference to every diagnostic and therapeutic item. He has paid special attention to pelvic inflammation, a subject well worth extended treatment on the part of any writer.

The work is divided into seventeen chapters, covering in all about one thousand pages.

Any of our readers desirous of purchasing a work on this subject, strictly modern and practical in every sense of the word, might do well to purchase Dr. Crossen's second edition.

W. A. Y.

A Handbook of Practical Treatment. In three volumes. By 79 eminent specialists. Edited by JOHN H. MUSSER, M.D., Professor of Clinical Medicine, University of Pennsylvania, and A. O. J. KELLY, M.D., Assistant Professor of Medicine, University of Pennsylvania. Volume 1. Octavo of 909 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Per volume: cloth, $6.00 net; half morocco, $7.50 net. The J. F. Hartz Co., Ltd., Toronto, Canadian agents.

Among the contributors to this work we find the names of some of the best-known physicians in America. Quite a number of the contributors are Canadians who have made a name for themselves in the United States. The list includes such names as: Sir Clifford Allbutt, M.D., Dr. James M. Anders, Dr. Lewellys F. Barker, Sir Lauder Brunton, M.D., Dr. Richard C. Cabot, Dr. Francis X. Dercum, Dr. Thomas B. Futcher, Dr. Hobart A. Hare, Dr. Theodore C. Janeway, Dr. Egbert LeFevre, Dr. Charles H. Mayo, Dr. William J. Mayo, Dr. R. Tait McKenzie, Dr. B. G. A. Moynihan, Dr. John H. Musser, Dr. Roswell Park, Dr. Alfred Stengel, Dr. Charles G. Stockton, Dr. Horatio C. Wood, Jr.

The book has been dedicated to "Horatio C. Wood, M.D., LL.D., Emeritus Professor of Materia Medica, Pharmacy and General Therapeutics, and a master of its art. An eminent and

forceful teacher. These volumes are affectionately dedicated by his pupils, friends and admirers."

The volume consists of nearly 900 pages and is divided into 23 chapters.

The first part of the book is devoted to a discussion of various therapeutic measures; the latter part to special treatment. The subjects discussed from a general viewpoint comprise Prophylaxis, Diet, Drugs, Rest, Exercise, Massage, Mechanotherapy, Psychotherapy, Hydrotherapy, Balneotherapy, Climatotherapy, Aerotherapy, Electrotherapy and Radiotherapy. Emphasis has been laid upon several sorts of specific therapy, enhancing the value of the book quite materially. The editors have noted particularly many of the more recent advances in therapeutics. Considerable attention has been devoted to etiology, to dietetic regulations, and to physiologic methods of treatment.

Judging from the character of Volume 1 we feel that this Handbook of Practical Treatment will receive a very hearty reception at the hands of the American medical profession.

Radium, Its Physics and Therapeutics. By Dawson Turner, B.A., M.D., F.R.C.P. Edin., M.R.C.P. Lond., F.R.S. Edin., Lecturer on Medical Physics, Surgeons' Hall, Edinburgh; Additional Examiner in Medical Physics to the Edinburgh University, and to the Royal Colleges of Edinburgh and London; Medical Officer in charge of the Electrical Department of the Royal Infirmary, Edinburgh. Pp. 86—x. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden, 1911.

In this very excellent little book the author has managed to compress a large amount of information into very small compass in most readable form, and has made use of a number of capital illustrations, those relating to conditions after treatment being especially good. A very conservative attitude is adopted, which further enhances the value of the work to those desiring to ascertain the present status of radium-therapy. The medical man who wishes to know something about radio-activity in general, the manner in which radium acts upon the tissues of the body and the changes it produces in them, the various methods

of applying radium as a curative agent, and the precautions to be employed in connection therewith, the class of cases in which it is specially applicable, and the results to be looked for, and, in fact, to become familiar with the radium of to-day, to such this modest volume will prove a boon. C. R. D.

The Encyclopedia Britannica: A Dictionary of the Arts, Sciences, Literature and General Information. Eleventh Edition, 29 vols. 4to (Cambridge at the University Press, 1910).

The appearance of a new edition of the Britannica has at any time in its long and honorable history been heralded as an event of real significance in the world of scholarship and letters. Issued, as this eleventh edition is, with the imprimatur of a great university, the event assumes an importance that is more than even national, for it is safe to say that the whole civilized world is directly interested in this extension of that University Extension Movement which, in the past, Cambridge has done so much to foster. It is nearly thirty years since the Britannica was last subjected to a thorough revision, and in this time the advances made by explorers in every field of inquiry have been enormous, greater, perhaps, than in any equal period of which records remain, while the general trend of thought has been almost radically modified, so that there is little difficulty in believing the statement made by the editor of this new edition that a bare fifteen per centum of the matter in it is directly traceable to previous editions.

Everyone on first looking at a work of reference instinctively tests it, not by its capacity to yield information on a subject of which he is ignorant, but by its treatment of one with which he is familiar. The medical man is no exception to the rule, and to him the scope and arrangement of the articles on medical subjects will as often as not give, rightly or wrongly, the measure of the whole work. Tested in this way, it will carry conviction as to the merits of other sections of the new Britannica to find that the space devoted in this eleventh edition to the subject of Medicine and Surgery and the allied sciences has been vastly extended. Not only does the medical section occupy nearly double the space that it did in the tenth edition, but the growth of medical knowledge has necessitated articles that were not pre-

viously included in its scope. The arrangement of the articles also differs to that previously adopted. Where formerly there existed a number of detached articles on various diseased conditions, an effort has now been made to link up the various sections and groups each in connection with a heading and showing the relation of the sub-sections to it. This has been done by the selection of certain anatomical divisions or main systems, and the addition to them of the physiology and pathology, and in some cases of the medicine and surgery of that system. When it is added that in the medical as in other sections the best men, regardless of nationality, have been asked to contribute the articles covering their special field of research, there is sufficient evidence to prove that in assuming the control of this mighty engine of instruction Cambridge has taken a step that will extend her influence far beyond the limits of her own students or of her extension classes.

To issue at one time a work so immense as the Britannica, instead of volume by volume extending over a period of many years, is a remarkable achievement, without precedent in the annals of publishing; and the gain to the work in unity and design is obvious. But not less revolutionary is the use of the famous India paper in the printing of a book of such a size. Indeed, the new edition is given to the world in a style which arouses a new conception of what such a work should be. The volumes of the India paper impression, bound in a handsome flexible leather binding, weigh less than three pounds each, and, with their thousand pages, are but an inch in thickness. Open them where you will, the pages lie perfectly flat, and the binding is so flexible that the covers may be folded back on one another and the book held in one hand for reading purposes. The experiment of adopting a paper hitherto confined almost entirely to the printing of high-class Bibles takes the Encyclopedia at once out of the class of library volumes and places it amongst the pleasant companions of any leisure moment, to be taken up and read with no more fatigue than is occasioned by the holding of an average novel.

That in itself would have sufficed to make this eleventh edition memorable in the history of book-production. Yet, scarcely less advance is shown in the quality of illustration.

There are many pages of beautiful half-tones, the three-color process has been drawn upon for exquisite plates, and the full-page maps make the volumes the most comprehensive of atlases. In the Index Volume we are promised, in addition to the very elaborate index proper, a classified table of contents, wherein will be collected under their appropriate sections the headings of all the articles which deal with a given subject, so that the reader who wishes to pursue some definite inquiry will find here a carefully mapped guide to his path. In this eleventh edition of the Encyclopedia Britannica we welcome a great achievement—a monument of British scholarship and energy, wisely directed, and of British thoroughness.

The Stereo-Clinic.—Kelly.

It is fortunate for the profession that at its forefront are such teachers as Kelly, Moynihan, the Mayos, Murphy, Crile and others of their class. Those who have seen the wonderful pains taken by Wilson, at Rochester, in making stereoscopic records of pathological conditions have marvelled at the care taken and at the beauty of the results.

So also those who have seen Dr. Kelly with his assistants in the operating rooms of great surgeons have marvelled at the many details, the great difficulties, and the patience and skill required to get accurate records of technique of operations in progress. Only the enthusiasm born of a conviction that his efforts will result in great good to the profession can account for the patience, time and care taken by Dr. Kelly to secure these stereoscopic records for his latest great work—*The Stereo-Clinic.* But—and this must not be forgotten—outside his own operating room Dr. Kelly's efforts would be fruitless except for the hearty co-operation of the world's great surgeons, who have done each some characteristic technique before his camera, taking infinite pains to show the important steps of such technique, and then supplementing these with carefully prepared explanatory text. Dr. Kelly has succeeded in dramatizing these surgical events, and the observer at the stereo-clinic can easily imagine himself in the presence of the operator, seeing his technique in clear and definite relief as the operation progresses. In no other way can the surgeon recall so vividly special technique that he desires to adopt, and in no other way can he so easily differentiate the

technique of several eminent operators as by means of Kelly's stereo-clinic, unless he can spend much of his time in constant touch with these men in their operating rooms, and this is not often possible.

We consider Dr. Kelly's Stereo-Clinic one of the most important surgical and photographic achievements of the present.

The Modern Treatment of Alcoholism and Drug Narcotism. By C. A. McBride, M.D., L.R.C.P. & S. (Edin.). New York: The Rebman Company, 1123 Broadway.

It has only been of recent years that the medical profession have come to the conclusion that inebriety is a disease, pure and simple. The condition is one that is unfortunately so common that medical practitioners will be interested in Dr. McBride's book, in which he deals fully with the treatment of alcoholism in its different phases. There has been as yet very little literature written on this subject, and the book under review should undoubtedly receive a very hearty welcome, coming as it does from the pen of a writer well able to handle this subject. The author has had over thirty years experience in the treatment of both alcoholism and drug inebriety, so that his conclusions are worthy of the most careful consideration. He has divided his book into six chapters as follows: "What is Inebriety," "Pathology," "The Causes of Inebriety," "The Forms of Inebriety," "Treatment" and "Ether Inebriety."

The book covers nearly four hundred pages, and we can heartily recommend it to our readers.

Dyspepsia; Its Varieties and Treatment. By W. Soltau Fenwick, M.D. (London), Doctor of Medicine of the University of Strassburg. Octavo of 485 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1910. Cloth, $3.00 net. Canadian Agents: The J. F. Hartz Co., Ltd., Toronto.

This very well-bound, well-written and altogether most acceptable volume should be a standard work on this subject. The writer's name alone should be sufficient to make further comment almost unnecessary. When we come to consider that in the working out of the theories and practice recommended in this work, the author has made personal examination and has

personally treated more than eighteen thousand persons suffering from indigestion, we come to realize what a tremendous volume of experience this must be.

The plan of the book recommends itself at once as, after describing the varieties of dyspepsia and their differential diagnosis, the author goes on to consider,

Dyspepsia due to abnormalities of secretion, to failure of the muscular power of the stomach, to inflammatory action, to disturbances of the nervous mechanism of the stomach, to displacements of the stomach, to the presence of foreign bodies and living creatures in the stomach.

Then we have general dyspepsia at different periods of life, and dyspepsia dependent upon diseases of other organs. The whole question of intestinal indigestion is taken up and thoroughly gone into.

The book is one which everyone interested in diseases of the stomach can hardly do without. A. J. J.

Hydrotherapy; Its General Application to Special Affections and the Technic or Processes Employed. By Guy Hinsdale, A.M., M.D. Publishers: W. B. Saunders Co., Philadelphia.

Fortunately physiological therapeutics is coming to occupy more of the attention and enjoy more fully the confidence of the thoughtful and enterprising members of the profession. Drugs hold very great prominence, not so much because of their great value as because there is an air of mystery about them and because each individual for himself can so easily prescribe and administer them. The author does not advocate giving up drug treatment, but on the other hand accords it a most important place in alleviating disease.

For the successful employment of many of the physical methods of treatment, the individual practitioner cannot well command the expensive equipment necessary. Only in an institution properly and often expensively fitted up can the best results be obtained.

Prominent among the simple, natural means to be employed with great advantage are baths of many kinds. The author's experience qualifies him for dealing with this subject authoritatively. This book is one of the most complete written in English.

B. E. M.

Vicious Circles in Disease. By JAMIESON B. HURRY, M.A., M.D. (Canada), Ex-President Reading Pathological Society. With illustrations. London: J. and A. Churchill, 7 Great Marlborough Street.

As stated by the author in his preface, "this monograph represents the first attempt to deal systematically with vicious circles in disease, and is offered to the profession with a full consciousness of many shortcomings." The book is one of 175 pages, and is divided into, in all, twelve chapters. These chapters include the following subjects: Circles Associated With the Nervous System, Circles Associated With the Cardio-Vascular System, Circles Associated With the Respiratory System, Circles Associated With the Digestive System, Circles Associated With the Urinary System, Circles Associated With the Sexual System, Circles Associated With the Eyes, Artificial Circles, The Breaking of a Circle by Natural Means, The Breaking of a Circle by Treatment.

The book is one of considerable interest and should, we feel, meet with a nice reception at the hands of the Canadian medical profession.

A Manual of Physical Diagnosis. By BREFNEY ROLPH O'REILLY, M.D., C.M. (F.T.M.C. Toronto, M.R.C.S. England, L.R.C.P. London), Demonstrator in Clinical Medicine and in Pathology, University of Toronto; Assistant Physician to St. Michael's Hospital, Toronto; Physician to Toronto Hospital for Incurables. With six plates and forty-nine other illustrations. Philadelphia: P. Blakiston's Son & Company, 1012 Walnut Street. 1911.

We take pleasure in congratulating our fellow practitioner and townsman, Dr. Brefney O'Reilly, on his Manual of Physical Diagnosis, a copy of which we have been favored with through his courtesy. It would be almost expected that any book from the pen of an O'Reilly would meet with a nice reception from the medical profession, especially in Toronto. It is not, however, because the author of this work happens to be an Irishman and O'Reilly by name that we say a word in its favor, but because the book deserves it. We notice from the frontispiece that the author has dedicated his book to "The Memory of John O'Reilly,

Surgeon-in-Ordinary to the Households of their Majesties King George IV and King William IV" and to "Honorable John Rolph, Founder of Medical Education in Upper Canada."

The book covers in all about 350 pages, and is handed to the profession in an exceedingly attractive form, from a typographical standpoint. This is due to the publishers, P. Blakiston's Son & Company, having printed it on good paper and in evidently new type. The work is divided into ten chapters in all, said chapters being devoted to Introduction, The Clinical History, General Inspection, Special Inspection, Topographical Anatomy, The Respiratory System, The Circulatory System, The Digestive System, The Genito-Urinary System and The Neuro-Muscular System.

Physical diagnosis is a subject about which no physician knows as much as he ought, and Dr. Brefney O'Reilly's book will be, we are sure, the means of adding to the knowledge on this important branch of medicine. W. A. Y.

Books Received.—We have been favored with a copy of E. Merck's new German Index. We regret that, so far, this work has not appeared in English; but we are informed by the publisher than an English edition will be published at the end of next year, selling for 16s. per copy.

Bismuth Paste in Chronic Suppurations. Its Diagnostic Importance and Therapeutic Value. By Emil G. Beck, M.D., Surgeon to the North Chicago Hospital, Chicago, Ill. With an introduction by Carl Beck, M.D., and a Chapter on the application of Bismuth Paste in the Treatment of Chronic Suppuration of the Nasal Accessory Sinuses and the Ear, by Joseph C. Beck, B.D., with eighty-one engravings, nine diagrammatic illustrations and a colored plate. St. Louis: C. V. Mosby Company. 1910.

This monograph of some two hundred and twenty-five pages is a clear exposition of the author's method of using bismuth paste in the diagnosis and treatment of chronic suppurating sinuses and abscess cavities.

Many of us have used Dr. Beck's paste and have found it of great value in certain cases, and we commend very heartily a consideration of this treatise to practitioners in general, who will

find the method of treatment therein described of definite therapeutic value. A. P.

A New Medical Journal, *Paris Medical.*

We have been requested to announce that Professor Gilbert, member of the Academy of Medicine, Paris, Professor of Clinical Medicine at the Hotel Dieu, Paris, and who has also published *A Treatise on Medicine, The Library of the Doctorate of Medicine and the Library of Therapeutics,* has associated with himself some of the most active of his collaborators in these works in bringing out at the same publishing house a new weekly journal, *Paris Médical.* This journal will contain 2,064 pages of reading matter and 500 illustrations a year. The subscription price is 12 francs in France and 15 francs in other countries.

Pocket cases, syringes, thermometers, etc., given as premiums will repay the greater part of the subscription price. If requested, a specimen copy of the journal will be sent free by the publishers, J. B. Baillière et Fils, 19 Rue Hautefeuille, Paris.

J. J. C.

An English edition of *Hartmann's Operative Gynecology.*

The profession will be pleased to know that Mr. P. Blakiston, president of the well-known firm of publishers, P. Blakiston's Son & Co., has recently arranged to have Hartmann's "Operative Gynecology" translated into English. The translation is to be made by Mr. Douglas W. Sibbald of the British Hospital, Paris, and Messrs. P. Blakiston's Son & Co. expect to be able to place this book at the disposal of the profession some time during the current year.

Dr. Skinner's Post Graduate.—We have recently been favored by the Arlington Chemical Company, of Yonkers, N. Y., with a copy of their latest Brochure. As the medical profession are aware, this firm for many years past have been in the habit of placing in the hands of the physicians throughout the United States and Canada particularly attractive, illustrated brochures. Their latest effort is certainly no exception to the rule, and we beg to extend our congratulations to the publishers. It is certainly a most unique piece of advertising.

A SANITARY MILK SUPPLY*

The attention of medical practitioners throughout Ontario has recently been called to the new Government Milk Bill as passed by the Ontario Legislature a few weeks ago. The subject of pure milk has for years been brought prominently to the notice of physicians, there being no question that the Government would ere long have to step in and introduce certain measures that would guarantee to the population of the Province a pure milk, free from contamination. By this bill the different cities in the Province are now given a reasonable control over their milk supply. The bill that has now become law also sets a general standard for Ontario in regard to other matters, including certain regulations as to the care of cows, the sanitary condition of cow byres, the water supply to the animals and the care of milk cans used in the handling of milk, etc. Medical practitioners hear a great deal about what is known as "certified" milk, many dairies having for some time past undertaken to supply what they term a "certified" milk that is anything but "certified." Some dairies seem to labor under the impression that all milk was "certified" if it were handled with any additional care, paying no attention whatever to the percentage of butter fat it contains, its freedom from bacteria, etc. Under the new Milk Bill the term "certified" is now protected by incorporating certain conditions that must be complied with before it can be used, such conditions to be certified to either by the Medical Health Officer of the city or an incorporated Medical Society or Association. One of the large dairies in town that takes a pardonable pride in supplying a certified milk is that of Erindale Farm, conducted by Messrs. S. Price & Sons, 255 Queen Street East. This firm have for years turned out a "certified" milk that can honestly claim to, shall we say, live up to the conditions as now imposed under the new Milk Bill. Erindale Farm have recently placed a sanitary seal on all their bottles of certified milk. It is absolutely impervious to water and dirt and guarantees protection against interference on the part of the driver of the wagon. There was recently an interesting "long

*Publisher's Department.

distance'' test made by this dairy. A patient was supplied with Price's milk. It was in the month of August during the hottest season. The lady was desirous of taking with her a sufficient quantity to supply her baby on the way across the Atlantic. This milk was found at the end of fourteen days to be just as sweet as when it left the dairy. Erindale Farm are now supplying the Hospital for Sick Children, Toronto. This milk is delivered in bulk, four hundred quarts daily. The milk is ''certified'' and showed recently a bacteria count of less than 1,000 per C.C. The monthly certificate, as furnished this firm for February, showed *entire absence of bacteria,* a splendid record, when it is considered that the Milk Commission of the Academy of Medicine allow 5,000 bacteria per C.C. in winter and 10,000 in summer. Erindale Farm are also supplying a large quantity of milk to Hamilton, Ontario, the result of, it is understood, the medical profession in Hamilton having recently formed a Milk Commission for that city.

WHY SPECIFY SMITH'S GRAPE JUICE*?

The attention of the readers of this journal is called to the product recently placed upon the market by Mr. E. D. Smith, of Winona. This firm's specialty is what might be termed an *aseptic Grape Juice,* and the manufacturer is anxious to bring it under the notice of the medical profession all over Canada. Mr. E. D. Smith uses in the manufacture of his Grape Juice only the choicest grapes obtainable. His nurseries are situated on the southern bank of Lake Ontario, in perhaps the richest grape growing district of Ontario. The grapes are specially picked, and Mr. Smith can honestly claim for his product that it is *absolutely pure* and *unfortified.* Smith's Grape Juice is particularly suitable for use by convalescent patients, being rich in quality, mildly stimulating in character and agreeable to the fevered palate. The medical profession are respectfully requested to specify ''Smith's'' when ordering Grape Juice.

*Publisher's Department.

The Canadian Journal of Medicine and Surgery

A Journal published monthly in the interests of Medicine and Surgery

Vol. XXIX TORONTO, MAY, 1911 No 5

Original Contributions

OBSERVATIONS ON SIMPLE GOITRE OCCURRING AT PUBERTY, WITH SPECIAL REFERENCE TO THE USE OF THYROID EXTRACT IN ITS TREATMENT

By Graham Chambers, M.B., Toronto.

My attention was called to the special therapeutic value of thyroid extract in the simple goitre occurring at puberty about a year ago. Previous to that time I was accustomed to treat all cases of simple goitre in a somewhat routine manner, which consisted essentially in the administration of thyroid extract, the local application of the ointment of red iodide of mercury diluted with an equal quantity of lard, and improvement in the hygienic conditions. In some patients I diminished the amount of protein in the dietary, having in mind the fact that in the case of some of the lower animals a pure meat diet causes a hypertrophy of the thyroid gland. Results obtained were very good. In most cases of recent appearance a cure was obtained, while of those which had existed for some time, some were cured, others improved and others again not benefited. These results are as one should expect from the study of the pathological anatomy of the disease, because we know that in long-standing goitres various degenerative processes are frequently present which are not amenable to medicinal treatment.

*Read at the Academy of Medicine, March 14th, 1911.

The goitre occurring at puberty is, according to my experience, a type of the disease which is amenable to medicinal treatment. Moreover, I have found in eight cases treated during the last year that the exhibition of thyroid extract, in doses of 10 to 15 grains a day, alone, without any local treatment, caused the enlargement of the thyroid to disappear. One case was of three years' duration, while in the other seven the goitre had not been present for more than six months. In one of the seven the enlargement of the gland reappeared after the drug had been discontinued. However, in this case the further exhibition of thyroid extract caused the goitre to again disappear.

Let us now consider the mode of action of thyroid extract in the treatment of simple goitre.

Simple goitre is a disease of which our knowledge is somewhat vague. We know that it occurs much more frequently in females than in males; that it is rare before puberty, but common at and for ten or fifteen years after that period. The cause of the disease is not definitely known. It was formerly thought to be due to drinking of water containing much calcium and magnesium salts, and in support of this theory attention was called to the prevalence of goitre in lime districts. Now-a-days this view is not generally accepted, because it does not explain all the facts. Goitre is common in districts in which water is free from lime. In our country, for instance, goitre is common in Muskoka, a district free from lime. Another theory of its origin is that it is due to mode of living, and especially to intermarriage. Hereditary influences would augment this causative factor. This affords an explanation of the prevalence of goitre in Switzerland, because in many districts in that country intermarriage is very common. It does not, however, explain all the facts known concerning the genesis of the disease. For instance, it does not explain why goitre is prone to appear at puberty, and why a goitre usually increases in size during menstruation, pregnancy and lactation; nor does it explain why the administration of thyroid extract diminishes the size of a recent goitre.

Any theory of the mode of action of thyroid extract in the treatment of simple goitre must conform to our knowledge of the pathological anatomy and physiology of the gland.

Simple goitre is generally looked upon as a hypertrophy of the thyroid gland, which may be diffuse or nodular. In the diffuse goitre the hypertrophy is equally distributed throughout a lobe, but one lobe may be enlarged more than the other; and in the nodular type there are circumscribed nodules in the gland, between which normal or degenerated glandular tissue is found.

Diffuse Goitre.

The diffuse goitre may present two forms, namely, (a) colloid goitre, (b) parenchymatous goitre.

(*a*) Colloid goitre is characterized by an increase in the quantity of colloid which results in dilatation of the follicles and more or less atrophy of the epithelial lining. In some parts interfollicular walls may be destroyed and cysts formed (cystic goitre).

(*b*) Parenchymatous goitre is characterized by proliferation of the parenchyma of the gland. In epithelial cells lining the follicles may be cylindrical and the follicle itself round, oblong or of a branching form. Into the lumina of some follicles papillary projections are present. The colloid is generally diminished. In some cases dilatation of the follicles occurs, which, associated with the papilllary ingrowth, produces a type of goitre known as papillary cystic. In parenchymatous goitre there is an increase in the activity of the function of the gland, and from this type of goitre Graves' disease may arise.

Nodular Goitre.

The nodules vary in number and size. Each nodule is surrounded by connection tissue, and may present the appearance of either colloid or parenchymatous goitre. The nodules may undergo various kinds of degeneration, producing types known as fibrous goitre, calcified goitre, etc.

The Nature and Course of the Simple Goitre Occurring at Puberty.

The kind of goitre which occurs at puberty should be classed with the parenchymatous, the hyperplasia of the parenchyma being probably the result of a stimulus from another tissue or organ of the body. The stimulus may be said to be a "call" for

more thyroid secretion, which is produced by hyperplasia of the glandular elements. If, in the early stages of such a goitre, thyroid extract is exhibited, one should expect the hyperplastic tissue to return to the normal.

The goitre occurring at puberty is a very common disease of girls. The course is variable. In the majority of cases it disappears without medicinal treatment. Some cases last a few months, others one or two years; others again are permanent. A few eventually become converted into Graves' disease. The enlargement of the gland invariably increases in size during menstruation, and if the patient should become pregnant the goitre enlarges, which enlargement continues during lactation.

The study of the physiology of the thyroid gland aids one in the understanding how it is possible for the exhibition of thyroid extract to cause certain forms of goitre to disappear. The thyroid gland secretes an internal secretion which takes an important part in metabolism, especially of proteins. If one feeds a human being, or lower animal, thyroid extract, the urea output in the urine is increased; and if one feeds some of the lower animals on a pure meat diet, the thyroid gland enlarges. The question naturally presents itself: Is the enlargement of the thyroid gland, such as occurs in goitre sometimes, due to a stimulus resulting from defective metabolism? This seems to me to be a probable explanation because it affords an explanation of the frequent enlargement of the thyroid at puberty and during menstruation, pregnancy and lactation, as protein metabolism is generally increased in these states. It also explains why the exhibition of thyroid extract is of value in the treatment of simple goitre occurring at puberty, inasmuch as the administration of the drug removes the cause of the enlargement.

Another theory of the origin of goitre is that the cause is a stimulus resulting from auto-intoxication. This presupposes that the thyroid has for a function the neutralization of poisonous substances absorbed from the intestine, or possibly formed during metabolism. This theory is supported by a number of facts, of which I shall mention two:

(1) After thyroidectomy in some animals symptoms appear

which closely resemble those of gastric tetany, which is thought to be due to auto-intoxication.

(2) After thyroidectomy anemia and changes occur in the blood, which suggests the presence of a hemolytic agent.

The view that a function of the thyroid gland is the neutralization of poisons also affords an explanation of the mode of action of thyroid extract in the treatment of goitre.

AN UNUSUAL COMPLICATION OF SMALL OVARIAN CYSTS

By James F. W. Ross, M.D.C.M.
Professor of Gynaecology, University of Toronto.
and
ARTHUR C. HENDRICH, M.A., M.B.,
Demonstrator in Gynaecology, University of Toronto.

The case to be reported was admitted to the Toronto General Hospital under the gynecological service, on Feb. 20, 1911, complaining of pain in the lower abdomen, with great swelling of the left leg.

Personal History.—Mrs. E. C., a big, fat subject, aet. 41 years, married 19 years, no children, no miscarriages. Menstruation began at 12 years and closed at 40 years. Regular up to a year ago, interval normal, amount and duration normal until this last year. In November and in December, 1910, there was no bleeding or discharge, but slight bleeding at the time the periods have usually come, in January and February, 1911. There are no urinary symptoms.

Present Illness.—Patient was taken ill the first week in January, 1911. Says she was completely run down and very hysterical. Her physician treated her for this condition and her anemia. Patient was confined to her bed for five weeks. When she got up could scarcely walk and suffered much pain in the lower abdomen.

Patient then noticed her left leg commencing to swell. This swelling continued to increase, and her physician, on making a pelvic examination, considered she should be sent to the hospital, and she was accordingly admitted on Feb. 20, 1911. Examination in the hospital showed the left leg enormously swollen and almost one-third larger than her right leg. The swelling extended from the toes to the groin.

The condition seemed one of venous obstruction rather than lymphatic. There was also an absence of inflammatory reaction such as one might expect in phlebitis or phlegmasia.

The question was: What was causing this venous obstruc-

tion? Now, in a patient aet. 41, with unilateral swelling of the limbs, one always thinks of malignant disease causing obstruction by its metostatic growths in the iliac glands and so pressure upon the iliac vessels.

Bi-manual examination, however, did not reveal any malignant growth of the uterus, but did reveal a tense, slightly fluctuating mass to the left of the uterus and well down in the pelvis. It was diagnosed as an incarcerated ovarian cyst, and abdominal section was performed.

Operation.—The usual medial sub-umbilical incision. Here the great size of the superficial and the deep plexus of veins was very noticeable, and bleeding was so great from them that they were ligatured. This enlargement was due, of course, to the established collateral circulation, much as one sees in hepatic cirrhosis.

On putting the patient in the Trendelenburg posture and packing back the intestines with sponges, a tumor about the size of a large orange was revealed to the left of the uterus and lying deep in the pelvis. It was an ovarian cyst which had become sub-ligamentous and was firmly bound down by adhesions to the rectum and the lateral wall of the pelvis.

These adhesions held the tumor lightly against the lateral walls of the true pelvis, and so compressed the iliac veins, both internal and external. Its action was to be compared to that of a ball-valve. The tumor was next freed from its adhesions, being peeled up from within, keeping close to the uterus, and from below, keeping well away from the dilated pelvis veins, and using the utmost gentleness.

The tumor proved to be a sub-ligamentous uniloculär ovarian cyst, containing a clear, translucent fluid, and being about two and one-half inches in diameter.

The usual ovariotomy was performed; the cyst was removed without rupture, the abdomen closed, and patient returned to the ward and kept very quiet for a number of days on account of a fear of pulmonary embolism after freeing the pressure upon the veins. The patient made a good recovery.

The swelling in the leg gradually disappeared, and at the end of two weeks was practically gone, though the patient was

kept quiet for one more week, and then allowed to get up and go about.

The chief interest in this case seems to one to be the symptoms of swelling of one leg.

For an ovarian cyst about the size of an orange to cause so much obstruction from its presence in the pelvis seems unusual, especially when one remembers how fluctuating a cyst of that size usually is.

The explanation is purely mechanical, and the symptoms were due to the cyst being bound down in a most unique manner by adhesions to the wall and fascia of the pelvis.

Canadian Journal of Medicine and Surgery

Editor:
J. J. Cassidy, M.D.
45 Bloor St. E., Toronto

Managing Editor:
W. A. Young, M.D., L.R.C.P., Lond.
145 College St., Toronto

Surgery:
N. A. Powell, M.D., C.M., Professor of Medical Jurisprudence, Toronto University; Senior Assistant in charge, Emergency Department, Toronto General Hospital; J. F. W. Ross, M.D., Professor of Gynecology, University of Toronto; Gynecologist, Toronto General Hospital.

Clinical Surgery:
Alex. Primrose, M.B., C.M., Edinburgh University; Associate Professor of Clinical Surgery, Toronto University; Secretary Medical Faculty, Toronto University; Surgeon Toronto General Hospital; and Herbert A. Bruce, M.D., F.R.C.S., Eng., Surgeon, Toronto General Hospital.

Orthopædic Surgery:
B. E. McKenzie, B.A., M.D., Toronto; Surgeon to the Toronto Orthopedic Hospital; ex-President of the American Orthopedic Association; and H. P. H. Galloway, M.D., Orthopedic Surgeon, Winnipeg General Hospital; Lecturer in Orthopedic Surgery, Manitoba Medical College; Member of The Medical Orthopedic Association.

Militia and Naval Medical Services and Ambulance:
J. T. Fotheringham, M.D., Lieutenant-Colonel, Army Medical Corps, Associate Professor of Medicine and Clinical Medicine, University of Toronto; Associate Collaborator Chas J. Copp, M.D., C.M., Hon. Sec. Provincial Council of Ontario, St. John Ambulance Association.

Medical Jurisprudence and Toxicology:
Arthur Jukes Johnson, M.B., M.R.C.S., Eng., Coroner for the City of Toronto; Surgeon Toronto Railway Co., Toronto; W. A. Young, M.D., L.R.C.P., Lond., Ex-President of the American Medical Editors' Association; Associate Coroner, City of Toronto.

Physiotherapy:
Chas. R. Dickson, M.D., C.M., Queen's University; M.D., University of the City of New York; Electrologist Toronto General Hospital, Hospital for Sick Children and St. Michael's Hospital.

Pharmacology and Therapeutics:
A. J. Harrington, M.D., M.R.C.S., Eng., Toronto.

Pediatrics:
Allen Baines, M.D., Toronto; Associate Professor Pediatrics, University of Toronto; Physician, Hospital for Sick Children; A. R. Gordon, M.D., Toronto; Senior Medical Assistant, Toronto General Hospital; Helen MacMurchy, M.D., Toronto.

Medicine:
J. J. Cassidy, M.D., Toronto, ex-Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; W. J. Wilson, M.D., Toronto, Physician, Toronto Western Hospital; and Dr. J. H. Elliott, ex-Medical Superintendent, Gravenhurst Sanatorium, Ont.; Associate Medicine and Clinical Medicine, University of Toronto; Senior Medical Assistant, St. Michael's Hospital.

Clinical Medicine:
Alexander McPhedran, M.D., Professor of Medicine and Clinical Medicine, Toronto University; Physician, Toronto General Hospital; Lewellys F. Barker, M.D., Professor of Medicine, Johns Hopkins University, Baltimore, Md. H. B. Anderson, M.D., Toronto; Associate Professor of Clinical Medicine, University of Toronto; Physician, St. Michael's Hospital.

Bacteriology:
J. G. Fitzgerald, M.D., Lecturer in Bacteriology, University of Toronto.

Mental and Nervous Diseases:
N. H. Beemer, M.D., Mimico Insane Asylum. Campbell Meyers, M.D., M.R.C.S., L.R.C.P. (London, Eng.), Private Hospital, Deer Park, Toronto.

Gynecology and Obstetrics:
Geo. T. McKeough, M.D., M.R.C.S., Eng., Chatham, Ont.; and C. F. Moore, M.D., Toronto.

Pathology:
W. H. Pepler, M.D., C.M., Surgeon Canadian Pacific R.R., Toronto; Junior Medical Assistant, St. Michael's Hospital; and J. J. Mackenzie, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology:
J. M. MacCallum, M.D., Toronto, Senior Assistant Eye Department, Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Nose, Throat and Ear:
Percy G. Goldsmith, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb; Senior Assistant Ear, Nose and Throat Department, Toronto General Hospital.

Dermatology:
D. King Smith, M.B., Tor., Toronto; Demonstrator in Pathology, Toronto General Hospital.

Address all Communications, Correspondence, Books, Matter regarding Advertising, and make all Cheques, Drafts and Post-Office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

Reprints supplied Authors at Cost.

Editorials

THE MEDICAL PROFESSION AND OSTEOPATHY

Osteopathic practitioners attach much significance to the state of the spinal ligaments and the attitudes of the vertebræ. One of the fundamental principles of their school is, that a large part, indeed the largest part of human ailments, even of acute diseases, such as the infections, etc., is due to dislocations of the vertebræ, which exert pressure on the outgoing spinal nerves, thus causing pressure on vasomotor nerves, and thereby inducing derangements of function. They assert that it is necessary to replace these dislocated bones, before maladies can be relieved. In the process of pushing and pulling these bones into place (which constitutes an essential part of osteopathic treatment), these lesions are said to be corrected.

According to the opinions of distinguished anatomists, such as Prof. George McClellan, of the Jefferson Medical College; Prof. George A. Piersol, of the University of Pennsylvania; Prof. Edward F. Reichert, of the University of Pennsylvania (*vide Monthly Cyclopedia and Medical Bulletin,* Philadelphia, February, 1911, p. 92), real changes in the relationships of the vertebræ are practical impossibilities, except when long standing or progressive mor-

bid processes have been the cause, as in lateral curvature, or in tubercular disease of the spine. However, these authorities admit that defective nutrition causes relaxation of the lateral and posterior spinal ligaments to such an extent that the *semblance* of a dislocation may be produced. After describing the appearance of a perfectly sound spinal column—the spinal processes in normal alignment, distance apart, degree of posterior projection—they say that disease produces an atrophy of some of them, infiltration and thickening of others, and, if long continued, asymmetries of the vertebræ, the spines apparently pointing in different directions. If the lesions have become chronic, the spines are found separated, owing to relaxation of the posterior spinal ligaments, so that marked depressions appear between two or more; or several vertebræ are depressed beneath the normal line of projection." They observe, however, that this *derangement* of the vertebræ is more apparent than real, the asymmetries being due to loss of tone and relaxation in the supporting ligaments, which disappear under appropriate treatment. So that, when all is said, both schools unite in advocating the necessity of treatment to diseased spinal columns. Osteopathy calls the disease " a dislocation of the bones of the back " ; orthodox medicine names it " a derangement of the vertebræ "—a mere logomachy.

Dr. Madison Taylor, from whose article we quote, has had clinical experience in the treatment of asymmetrical spine, if one may be permitted to coin a term

descriptive of the bone of contention. He says: " Not only is it possible to produce remarkable and gratifying effects by judicious manipulations, but, by injudicious procedures, ill effects are sometimes wrought. This is especially noticeable in the effects produced on blood pressure, sending it up or down to such an extent as to prove menacing, possibly disastrous."

He shows, that, judiciously applied, alternating pressure over certain areas of the back, can induce vasoconstriction in definitely determinable areas, or that steady or distributed pressure can induce, per contra, vasodilatation. By these procedures, he thinks it is feasible to enhance functional restoration, and greatly to supplement other remedial agencies.

Dr. Taylor does not use " vibrators " in this treatment. The time required for hand treatment is brief, and the exertion necessary to do good work small, so that artificial power is uncalled for. Besides, it is necessary to feel, in order to know by the sense of touch, what one is doing. To prolong pressure unduly, or to exert too great power, as the least evil, may nullify the desired effect, exhaust the reactionary resources of the nerve centres, or may actually produce evil effects.

This form of examination of the vertebræ may also be applied for diagnosis, in elucidating obscure clinical problems. Usually, the spinal column is neglected in the examination of patients; clinicians scrutinize, palpate, and stethoscope the front of the body, while neglecting the back. Perhaps the osteo-

pathists may teach the clinicians something worth knowing.

The difference between clinical medicine and clinical osteopathy may be chiefly a different interpretation of the same clinical signs. The signs should be looked for, and when found, an explanation of their meaning attempted or given. J. J. C.

GASTRIC ULCER

In presenting a case of gastric ulcer before the clinic to the profession at The Toronto General Hospital, April 5, 1911, Dr. Graham Chambers, of Toronto, expressed the opinion that this formidable lesion is sometimes confounded with other diseases of the stomach, such, for instance, as hyperchlorhydria. This mistake may be made, because there may be no marked symptoms of disorder of the stomach, or there may be only slight discomfort after food with occasional vomiting. As a rule, there are unmistakable symptoms, including pain in the middle epigastric line, tenderness, vomiting and hematemesis. When marked pain in the middle line of the epigastrium occurred, either immediately or a short time after the taking of food, the paroxysm then lasting till the food had left the stomach, either by the pylorus, or by being vomited, more especially if the patient were a chlorotic woman of between twenty and thirty years of age, Dr. G. Chambers thought that a tentative diagnosis of gastric ulcer should be made. The probability of the correctness of such a

diagnosis would be much increased should hematemesis occur, even though the quantity of blood should be small in amount. The blood may be red, if abundant, or may present the appearance of coffee grounds, owing to the hemaglobin being converted into hematin by the gastric juice. Altered blood may also appear in the stools (melena). In gastric ulcer, the blood is always brought up by vomiting; it is generally dark, does not froth, is often acid; pain in the epigastric region and tenderness are commonly present. There is sometimes a marked pallor, but emaciation is not generally observed. Strange to relate, a patient with gastric ulcer may suffer during a period of years from recurring attacks of hematemesis.

Many recover under treatment in a few weeks, but in some cases relapses are common. Dangerous hemorrhage occurs in a few cases, and perforation of the stomach is a complication which cannot be foreseen, but is generally fatal unless operation is resorted to immediately.

In the treatment of the case, presented at the clinic, absolute rest in bed was insisted on. As hematemesis had been a marked symptom, twenty minims of adrenalin were given, per os, every twenty minutes, until the hemorrhage ceased. Given by the stomach, adrenalin has been observed to act locally and restrain hemorrhage, but does not exert any influence on blood pressure.

Rectal feeding was also employed, each of the preparations used being given every six hours, in the

following order:—(1) A simple enema to cleanse the bowel; (2) a nutrient enema, consisting of glucose, 30 grams; yolk of one egg; sodium chloride, 0.5 gram; pancreatized milk to 300 c.c.; (3) saline solution injected into the rectum.

Absolute rest in bed would be maintained for many weeks, and the return to ordinary diet would be gradual, only liquids being given at first. J. J. C.

AN ACT TO AMEND THE CANADA MEDICAL ACT

At page 270 of this issue appears the text of an Act to amend the Canada Medical Act, as it is at the present date. We are informed by Dr. J. B. Black, M.P., who has charge of the Bill, that it will receive its third reading in the Senate when they reassemble on the 17th inst., and that no opposition or amendments are expected in that body. It differs little from the Canada Medical Act of 1910, a few changes having been made by the special committee of the House of Commons, which had charge of it. The most important change is one relating to the composition of the council, which is to be established under the Act. Thus, sub-section 1, section 7, of the Canada Medical Act of 1910, in which it was stated that the council shall be composed of " (a) Three members, who shall be appointed by the Governor-in-Council, each of whom shall reside in a different Province," is repealed, and the following words sub-

stituted therefor: The Council shall be composed of " (a) Three members, who shall be appointed by the Governor-in-Council, each of whom shall reside in a different Province; but, until such time as the Provinces of Saskatchewan, Alberta and British Columbia shall have been entitled to university representation, two of the three members so appointed shall be chosen from two of these Provinces." The other sub-sections, referring to the composition of the Council, remain unaltered.

The Council to be established would, therefore, consist of: Eighteen Provincial representatives, each Province having two; seven university representatives, each university medical faculty in Canada having one; three homeopathic representatives; three representatives appointed by the Governor-in-Council—in all, thirty-one members. Apportioning the representatives in the Council among the Provinces, Nova Scotia, which has a medical faculty, would have three members; New Brunswick, two members; Prince Edward Island, two members; Quebec, which has two medical faculties, four members; Ontario, which has three medical faculties, five members; Manitoba, which has a medical faculty, three members; Saskatchewan, three members; Alberta, three members, and, if the Governor-in-Council should select his third appointee from British Columbia, that Province would have three members. In any event, the Western Provinces of Canada, *viz.,* Manitoba, Saskatchewan, Alberta and British Columbia, would have eleven, possibly

twelve, representatives belonging to the regular school of medicine. Moreover, as one of the homeopathic representatives would probably be selected from a western Province, Western Canada would thus have a representation on the Medical Council of twelve or thirteen members, *i.e.*, 38.7 per cent. to 41.93 per cent. of the whole number.

Another slight amendment in paragraph H, subsection 1, section 11, provides for " (H) The admission to examination of holders of diplomas obtained outside of Canada from a medical school recognized by the Council."

In reference to examinations, it is stated that, in addition to the subjects of examination, " the eligibility of candidates shall be decided by the Council."

In the matter of registering the diploma of a person who, having been in active practice in a Province of Canada for ten years previous to the establishment of the Council, wishes to register in another Province, it is provided that the medical council of that Province may exact, if so minded, an examination on final subjects. This examination shall be held according to the provisions of the by-laws or rules of the said medical council.

Although this Act will be passed by the Parliament of Canada, it cannot become law, until each one of the nine Provinces of Canada shall have passed enabling legislation accepting it. So far, such legislation has been passed by the Legislatures of Nova Scotia, Prince Edward Island, Manitoba, Saskatchewan, and Alberta; it has not yet been passed

by the Legislatures of Ontario, Quebec, New Brunswick and British Columbia.

Whether it is adopted by all the Provinces, or not, the Canada Medical Act will reflect credit on its distinguished author, Dr. Roddick, and its able promoters in the Parliament of Canada. It will always receive a hearty support from the rank and file of the medical profession of Canada. Hence, it seems probable, that this Act will come into force some day, sooner perhaps than anyone can foretell at the present time. When made the law of the land, it will enable the doctor to select the scene of his labors in that part of Canada most congenial to himself, and, consequently, most likely to call forth his best efforts. Practising in a favorable environment, the doctor will strive earnestly to make the wheels of life move with less effort for his patients. A doctor, by the sympathetic exercise of his profession, can soften the asperities of life to the poor in the wide, thinly-populated parts of this country, can teach his neighbors something of medical and sanitary truth, and, even when laboring among antagonistic races, can be a strong bond of national union. J. J. C.

PERSONAL

Dr. H. A. Bruce spent a week last month at Atlantic City.

Dr. E. H. Greene, of Carlton Street, has removed to his new residence, No. 124 Bloor Street West.

Dr. Donald McGillivray, of College Street, removed on May 1st to the corner of Avenue Road and Elgin Avenue.

We take this opportunity of tendering to Dr. Stanley Ryerson our congratulations upon the birth of a son and heir.

Dr. Graham Chambers was elected chairman of The Section of Medicine at The Academy of Medicine, on April 11th.

CLUTTERBUCK.—At Grace Hospital, on Monday, April 10, 1911, to Dr. and Mrs. Herbert E. Clutterbuck, a son.

Dr. J. G. Fitzgerald, Lecturer in Bacteriology, University of Toronto, has resigned to accept the position of Assistant Professor of Bacteriology in the University of California. Dr. Fitzgerald will spend the coming summer in Germany.

As we go to press, we understand that Dr. R. J. MacMillan, of 76 Gerrard Street East, has been asked to temporarily fill the vacancy at Toronto General Hospital caused by the resignation of Medical Superintendent Dr. J. N. E. Brown, who sailed, with Mrs. Brown, for England, on April 21st.

We wish to congratulate Dr. Norman Wilson, son of our esteemed collaborator, Dr. W. J. Wilson, of College Street, on having successfully passed his "Triple Qualification," in London, last month. Dr. Norman Wilson intends remaining in England until after the Coronation festivities.

It was with sincere regret that the medical profession read of the untimely death, on April 11th, of Dr. James Bell, of Montreal. The Doctor had not been ill for any great length of time, his demise being due to an acute attack of pneumonia. We tender to Dr. Bell's family and to the profession in Montreal, very sincere sympathy.

Dr. W. E. Gallie, of 143 College Street, sailed for England on April 14th. Dr. Gallie intends " going after " his F.R.C.S. this summer, and, subsequent to his examinations, will enjoy a little golf around the most fashionable English and Scottish links. We wish Dr. Gallie heartiest of good wishes, and hope to be able to welcome him back to Toronto as Fellow of The Royal College of Surgeons.

The Canadian Medical Exchange, conducted by Dr. Hamill, 75 Yonge Street, besides arranging the sale of medical practices and properties between vendors and vendees, also is in a position to furnish locum tenens work and assistanceships, especially to Council graduates, at all times. The Exchange also has at present a number of applications from different villages where there is no doctor, and where they want one to locate, and the size of the villages and surrounding country would warrant one believing that a practice of at least from $2,000 to $3,000 a year could be done. Anyone interested in any of the above can secure full particulars by dropping Dr. Hamill a request; in fact the Medical Exchange endeavors to act as a central depot to secure a short-cut to the goal desired by physicians. Offers of practices for sale will be found among our advertising columns.

Obituary

THE LATE DR. CHARLES M. STEWART

It was with the greatest horror that the medical profession in Toronto learned of Dr. C. M. Stewart's sad death on March 25th.

Dr. Stewart was riding horseback on that afternoon on Yonge Street close to Mount Pleasant Cemetery. His horse became very much frightened at the whistling of a passing Metropolitan car and reared up, throwing him immediately on to the track in front of the car. He was instantly killed.

Medical assistance was immediately summoned, but to no effect. Dr. Stewart's death is particularly sad, as he was a most popular young man and doing an exceedingly nice practice as an ear, nose and throat specialist at 142 Carlton Street.

We take this opportunity of conveying to Dr. Stewart's family our very sincere sympathy.

ALEXANDER BETHUNE

BETHUNE—At Emo, on April 8, 1911, Alexander Bethune, M.D., aged 77 years.

THE LATE WILLIAM WARREN POTTER OF BUFFALO, N. Y.

The death of Dr. William Warren Potter of Buffalo, N.Y., a few weeks ago is a distinct loss to the American medical profession. Dr. Potter has been a prominent figure for many years past among the surgeons of America. He had a large number of friends throughout Canada, particularly so in Toronto. His funeral took place from his home, No. 238 Delaware Ave., Buffalo, N.Y., on March 18th, among the pall-bearers being Dr. H. E. Hayd, Dr. F. Park Lewis, Dr. Charles G. Stockton, Dr. Marshall Clinton, Dr. L. Burroughs, jr., Dr. Lee H. Smith. The State Education Department was represented at the funeral by Dr. Augustus S. Downing of Albany, N.Y., and the State Board of Medical Examiners by Dr. Frank W. Adriance of Elmira, Dr. R. O. Williams of Rochester, Dr. Lee H. Smith of Buffalo, and Dr. M. J. Lewi of New York.

News of the Month

BILL 15.—AN ACT TO AMEND THE CANADA MEDICAL ACT

(Reprinted as amended and reported by the Select Committee to which it was referred.)

His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. Paragraphs (*c*) and (*d*) of section 2 of *The Canada Medical Act*, chapter 137 of the Revised Statutes, 1906, are repealed and the following are substituted therefor:—

"(*c*) 'University' shall mean any university which has a teaching medical department in connection therewith, and has the power to grant medical degrees;

"(*d*) 'medical school' includes any institution recognized by a provincial medical council wherein medicine is taught."

2. Paragraphs (*c*) and (*e*) of section 5 of the said Act are repealed and the following is enacted as paragraph (*c*) of the said section:—

"(*c*) The determination and fixing of the qualification and conditions necessary for registration, the examinations to be undergone with respect to professional subjects only, and generally the requisites for registration: Provided that the council shall not determine or fix any qualifications or conditions to be complied with as preliminary to or necessary for matriculation in the study of medicine and for the obtainment of the provincial licenses, these being regulated as heretofore by the provincial authorities."

3. Subsections 1 and 3 of section 7 are repealed and the following are substituted therefor:—

"7. The Council shall be composed of—

"(*a*) three members, who shall be appointed by the Governor in Council, each of whom shall reside in a different province; but until such time as the provinces of Saskatchewan, Alberta

and British Columbia shall have been entitled to university representation, two of the three members so appointed shall be chosen from two of these provinces;

"(*b*) two members representing each province, who shall be elected under regulations to be made in that behalf by the provincial medical council;

"(*c*) one member from each university or incorporated medical college or school in Canada having an arrangement with a university for the conferring of degrees on its graduates, engaged in the active teaching of medicine, who shall be elected by the university or by such college or school under such regulations as may govern in that behalf;

"(*d*) three members who shall be elected by the homeopathic practitioners in Canada, each of whom shall reside in a different province."

4. Subsections 1, 2, 3 and 4 of section 8 of the said Act are repealed, and the following are enacted as subsections 1 and 2 of the said section:—

"8. The term of office for members shall be four years.

"2. Any member may at any time tender his resignation by written notice thereof to the president or to the secretary of the Council, and, upon the acceptance of such resignation by the Council the Council shall forthwith give notice in writing thereof, in case of an appointed member, to the Secretary of State of Canada, and in case of an elected member, to the secretary of the Medical Council for the Province, or to the university, incorporated medical school or college, or if a representative of the homeopathic practitioners resigns, to the remaining homeopathic representatives upon the Council.

5. Subsection 2 of section 10 of the said Act is amended by striking out the word "twenty-one" in the second line of the said subsection and substituting therefor the word "eleven."

6. Paragraph (*b*) of subsection 1 of section 11 of the said Act is repealed and the following is substituted therefor:—

"(*b*) the summoning and holding of the meetings of the Council, the times and places where such meetings are to be held, and the conduct of business thereat."

7. Paragraphs (*g*) and (*h*) of the said subsection 1 of section 11 are repealed and the following are substituted therefor:—

"(*g*) The establishment, maintenance and effective conduct of examinations with respect to professional subjects only, for ascertaining whether candidates possess the qualifications required; the number, times and modes of such examinations; the appointment of examiners; and generally all matters incident to such examinations, or necessary or expedient to effect the objects thereof;

"(*h*) The admission to examination of holders of diplomas obtained outside of Canada from a medical school recognized by the Council."

8. Paragraph (*a*) of section 12 of the said Act is repealed and the following is substituted therefor:—

"(*a*) No candidate shall be eligible for any examination prescribed by the Council, unless he is the holder of a provincial license, or unless he presents a certificate from the registrar of his own provincial medical council that he holds a medical degree accepted and approved of by the medical council of the said province."

9. Section 14 of the said Act is repealed and the following is substituted therefor:—

"14. The Council shall make such regulations as shall secure to homeopathic practitioners, and to all applicants for registration who desire to be practitioners of the homeopathic school, rights and privileges in respect of registration by the Council not less than those now possessed by them under the laws of any province, and under the regulations of the provincial medical council thereof."

10. Section 16 of the said Act is repealed and the following is substituted therefor:—

"16. The subjects of examination and the eligibility of candidates shall be decided by the council, and candidates for examination may select to be examined in the English or French language. A majority of the committee conducting the examination of any candidate shall speak the language in which the candidate elects to be examined;

"2. Examinations may be held only at those centres at which there is a university or college actively engaged in the teaching of medicine or having hospital facilities of not less than one hundred beds."

11. Subsections 2 and 3 of section 18 of the said Act are repealed and the following is enacted as subsection 2 of the said section:—

"2. Any person who has received a license or certificate of registration in any province previous to the date when the Council has been first duly constituted under this Act, and who has been engaged in the active practice of medicine in any one or more provinces of Canada, shall, after ten years from the date of such license or certificate, be entitled to be registered under this Act as a medical practitioner, without examination, upon payment of the fees and upon compliance with the other conditions and regulations for such cases prescribed by the Council: Provided that if the medical council of any province is not satisfied with the period of years prescribed by this subsection, such medical council may, as a condition to provincial registration, exact an examination in final subjects from practitioners registered under this subsection, and the said examination shall be held according to the provisions of the by-laws or rules of the respective provincial councils."

12. The said Act is amended by adding thereto the following section:—

"24. No amendment to this Act may be proposed on behalf of the Council unless previously accepted by the provincial medical councils."

13. This Act shall not come into force until the legislatures of all the provinces have enacted legislation accepting its provisions: Provided, however, that the medical board of any province may at any time order the withdrawal of the representation of the said province upon the Council, by a resolution passed at a general or special meeting of the said board called for the purpose and carried by the votes of two-thirds of the members present at the said meeting, and notice of which resolution has been inserted for three months previously in *The Canada Gazette;* and in case of such resolution being passed, the provisions of this Act shall immediately cease to apply to the said province and no more persons shall be given the right to practise medicine within the jurisdiction of the said legislature by reason of their qualification or registration under this Act.

BANQUET TO DR. J. N. E. BROWN, RETIRING MEDICAL SUPERINTENDENT, TORONTO GENERAL HOSPITAL

A complimentary banquet was tendered Dr. J. N. E. Brown on Saturday night, April 8th, at the York Club by the members of the Medical Staff of the Toronto General Hospital on the occasion of his retiring from the Superintendency of that institution. Dr. Bingham was chairman, and Dr. Brown was presented with an illuminated address, which was read by Dr. Wishart, and was as follows:—

"*Dear Sir,*—The occasion of your departure from the Toronto General Hospital, where you have for the past six years so successfully filled the office of General Superintendent, is one which your colleagues, the members of the Medical Staff, desire to take advantage of by uniting to testify to the sound character of the work performed.

"You succeeded to the post of Superintendent at a time when circumstances combined to render it a matter of great difficulty to discharge the duties thereto attached; the staff was in process of reorganization, the sympathies of many of the general public had become alienated, and the task of a complete remodelling of the institution very largely devolved upon your shoulders.

"You brought to your assistance in this emergency a considerable knowledge of affairs and a marked business ability, gained by years of private medical practice, followed by the training derived by residence in the Yukon during the days of its maddest rush for gold, in the capacity of Territorial Secretary to the Government of that District; and thus equipped, you set about your task.

"That you have succeeded we are here to-night to bear witness, and you may go forth with the assurance of the staff that a wonderful degree of harmony in the working of the whole complicated machinery of the hospital has been effected under your management. No member of the staff has ever required to cross words with you, and it is well known that never in the history of the hospital has it been less difficult to induce private patients to enter our wards, while the constant and insistent demand for accommodation which exists is the best evidence that the public have learned to look upon the General Hospital as a valued friend,

and to these ends your tactful dealing has largely contributed.

"We have to commend you specially for faithfulness in the discharge of duty, for constancy to your post early and late, for a never-varying courtesy, sympathy and good temper in dealing with the difficult and heterogeneous situations which occur daily in hospital management or in connection with the often unreasonable, but yet pardonable, demands of patients or their friends, and withal for a self-obliteration which has been an outstanding feature of your every act.

"In addition to what may be termed the qualities of your internal management, you have added not a little to the prestige of the hospital abroad by your mastery of the technique of hospital administration and by your publications thereon, as well as by the leading part you have taken in organizing the Canadian Hospital Association of Superintendents. You are now about to still further enlarge that knowledge by a study of the Continental hospitals, and we predict for you the gathering of further laurels in this valuable line of work.

"In bidding you adieu, we unite in expressing the hope that the same success which is manifest in the work you are just relinquishing with us may attend your future labors, ensuring you many years of continued usefulness, to which we trust may be added to you and to Mrs. Brown the fullest measure of health and happiness.

"Toronto, April 8th, 1911."

Dr. Brown replied as follows:

Gentlemen,—I scarcely know how to thank you for this honor in tendering me such a sumptuous banquet, so adulatory an address and so beautiful a gift.

What I have done to deserve them I do not know.

You have made me very happy and proud. Happy because of this expression of your confidence and approval, and proud because I am a humble member of a profession of gentlemen of such keen sensibilities, so kindly in thought and deed, and so appreciative of work done in the interests of humanity. Truly, Stevenson was right when he said that the medical profession is the flower of our civilization.

I may be pardoned for saying this because, for the past few

years I have not been in active practice, and, as a consequence, have been able to look upon your work somewhat as an outsider, yet as one having a knowledge of the game. And you know that an onlooker who knows the game often appreciates the points better than the players themselves.

During the last twelve years I have had the privilege of becoming acquainted with many thousands of people of all sorts and classes, under varied circumstances. None have won my admiration and respect more than the members of our profession.

As Superintendent of the Toronto General Hospital, I have always found you ready to give of your time and energies unstintingly for the welfare of the patients under your care.

I have never needed to "cross words with you," because you have been instant in season and out of season. So that the success which you generously attribute to my administration is really largely due to your faithfulness. I have been the Tom Sawyer, who looked on while you have been whitewashing the fence.

In reverting to my work during the past six years, my object has been to see that the patients have been made as comfortable as was possible in an old and out-of-date building; to see, also, that they have been kindly treated and given the best attention. In how far this has been accomplished no one knows quite so well as yourselves.

It has also been my endeavor to give support to every movement the object of which was the scientific study and treatment

As to the non-professional side of the work, the difficulties of disease and the advancement of the medical knowledge.
of administration have been many, and one of the chief of these has been to provide an efficient service and at the same time to keep down expenses. And here I must express my most grateful appreciation of the splendid support I have received from my working staff, both of the present and of the past, in spite of the fact that they have often been overworked and underpaid.

Yet the office has its attraction in its many-sided nature—the outreach into problems not only professional and humane, but into those also strictly commercial and economic. In fact there are few departments of the world's work that do not have

a branch in the office of the administrator of a large general hospital.

But I must not trespass on your time with a rehearsal of the past.

Gentlemen, I echo the words of your delightful address: Our relations have been of the most harmonious character, and it was with sincere regret that I felt compelled to take the step which severed them.

And now, though I am free, and the wanderlust possesses me, yet I feel that there is a cord binding me strongly to you, my brothers of the profession, and I shall be well content if destiny brings me back among you to co-operate with you in the further service of humanity.

Mrs. Brown joins me in saying, "God bless you all."

Dr. R. A. Reeve presented Dr. Brown with a beautiful silver salver, and spoke in a very laudatory and kindly way of Dr. Brown's sterling qualities and of the splendid work that he had done as Superintendent of the hospital.

The toast of the "Toronto General Hospital" was proposed by Dr. Herbert Bruce, and responded to by Mr. Cameron. Other speeches were made of a very complimentary character in reference to Dr. Brown's excellent work, by Dr. Temple, Dr. Grassett, Dr. Adam Wright, Dr. Baines and Dr. Ross, and these speakers also expressed their deep regret at the loss the General Hospital would sustain in Dr. Brown's departure. The following members of the staff also attended the dinner: Drs. McPhedran, W. P. Caven, Chambers, Primrose, McIlwraith, Fotheringham, Thistle, D. C. Meyers, Rudolf, Johnston, Gordon, Trow, C. L. Starr, F. Starr, Marlowe, MacLennan, Malloch, Harold Parsons, Goldie, Joseph Graham, O. R. Mabee, Geoffrey Boyd, King Smith, Richardson, G. W. Ross, Colin Campbell, Goldsmith, Kinnear, Howland, Hendry, Royce, Burson, Lowry, McMillan, Strathy, A. A. Beatty, W. Jones, J. A. Roberts, Gallie, Shenstone, Cole, Hendrick, John McCollum, Arthur Wright, W. Mabee, Robertson.

THE NEW TORONTO GENERAL HOSPITAL

Under a warm sun, but a chilling wind, about a thousand people witnessed, on Tuesday forenoon, April 11th, the laying of the corner-stone of the new General Hospital by His Excellency Earl Grey, and saw in the initial stages of construction what will be, when complete, the best equipped hospital in the Dominion, and one of the best on the continent. Its cost, when completed, will be $2,600,000.

To use the language of Lieutenant-Governor Gibson, the recovery of over ten acres of land in the College-Elizabeth-Hayter-Christopher section of the historic "Ward," and the devotion of so large an area to the uses and requirements of a hospital is nothing short of an event in the history of this city.

Honored guests like the Governor-General, the Lieutenant-Governor, the Premier of Ontario and the Mayor of the city, saw from the temporary platform around the corner-stone nothing but the disorder or construction outside the little flag-flanked enclosure. Not many months hence, as Mayor Geary pointed out, the citizens will be passing by the great pile of stately buildings "very comfortably accepting it as a matter of course."

Six speeches were made, a psalm read and prayers offered, yet the whole ceremony was over in 45 minutes. Earl Grey said facetiously that he had heard the best speeches he had ever heard in Canada, and he singled out that of Sir James Whitney for especial praise—Sir James, who said it all in thirty words. The arrangements were faultless. There was not a hitch or a break in the proceedings from beginning to end.

To the right and left of the platform were a few ladies carrying large bouquets of roses. The women included Lady Sybil Grey, Mrs. Gibson and Mrs. Falconer.

Mr. J. W. Flavelle, chairman of the board of trustees, made a brief address before introducing the speakers of the day, in which he thanked the Ontario Government, the University of Toronto, the City of Toronto, the private contributors and the press for the help given towards the attainment of the ideal of many years.

He described how the site comprised a little over ten acres,

upon which had formerly stood some 200 houses owned by about one hundred different people. There is already, he said, under contract $1,400,000 worth of buildings, and when further contracts are let, the expenditure will be brought to $2,000,000.

"The site cost us $600,000," he concluded, "so that you will see our total expense will be $2,600,000. We have received a grant from the University of Toronto of $600,000; $400,000 has come from the city of Toronto, and $1,000,000 more has been contributed by private citizens. It will, therefore, be necessary to ask for $600,000 more, so that when the buildings are completed we may open it free of debt."

President Falconer, of the University of Toronto, the first speaker, emphasized the example of the union of science and philanthropy which the hospital affords. He thought the co-operation of the University with the hospital was most happy and auspicious. At last proper clinical facilities for the medical department of the University were afforded.

Mayor Geary thought that the most significant thing about the enterprise was not the outlay of so great a sum for "the best equipped hospital in the Dominion," but rather the fact that it means that Toronto, which has hitherto lagged, has now taken her proper place in the van as regards the care and treatment of her sick or injured. The Mayor's warm tribute to Earl Grey for his vigorous Canadianism evoked a burst of applause. The Mayor concluded:

"The donation, if you wish to call it—I would call it a fulfilled obligation—the sum the city gave to this enterprise was never given with greater good-will. We feel certain that what we have given will be returned to us a thousand-fold."

"On behalf of my colleagues—and I think I may say on behalf of the people of Ontario—I come to wish you God-speed in this great work," said Sir James Whitney, and then sat down amid laughter and applause. It was so unexpected, so unique, that it fairly took one's breath away.

"I think I could beat the Premier," began Lieutenant-Governor Gibson, laughing, "in the brevity of his speech by saying, 'Me, too!'" (Renewed laughter.) He said he did not propose to do much more than that. Colonel Gibson paid a few informal tributes to old members of the board of trustees, who were: Mr.

J. L. Blaikie, who, he said, had served half a lifetime on the board, and Dr. O'Reilly, who had spent between 35 and 40 years in the practice of his profession.

The venerable Dr. A. Carman, superintendent of the Methodist Church, then read the "Shepherd Psalm," prefacing his reading by observing that the familiar "The Lord is My Shepherd," "would often be heard in the wards—a psalm so catholic, yet so pastoral, so sweet yet so mighty." He was followed by His Lordship the Bishop of Toronto, who read some special prayers adapted for the occasion from the Church of England service. The whole crowd clear out to the street stood with bared heads while the invocation was made.

After a copper box, containing, according to Mr. P. C. Larkin, the vice-chairman, the names of the trustees, active and honorary, a sketch of the hospital and the newspapers of to-day, had been put in a cavity, Earl Grey advanced and laid the corner-stone with a silver trowel. The big two-ton stone was let down and put in place as if it had been a brick.

Earl Grey's address was informal. He got a homely illustration from a Toronto caddie who, when asked what was his job, replied, "I help everyone all I can." "For almost a hundred years the General Hospital has been practising that motto," he said.

"God Save the King" and three cheers followed Earl Grey's speech, and then His Excellency proposed three cheers and a tiger for the board of trustees and Mr. Flavelle, the chairman.

The following resumé of the history of Toronto General Hospital is interesting:

In the minutes of His Majesty's Council for the Province of Upper Canada, under date of June 9, 1818, occurs the birth notice of the Toronto General Hospital. It reads as follows:

"That the Hospital Reservation in the town of York be granted to the Honorable Chief Justice Powell, the Honorable James Baby, and the Honorable and Reverent Dr. John Strachan, and to their heirs and assigns forever in trust."

This reservation and appropriation of the lands mentioned marks the inception of a trust which for almost a century has been charged with the raising of funds for the erection and maintenance of a hospital in the town of York, and the city of To-

ronto, as afterwards called. The present board are successors to the one originally named, and have the same powers and responsibilities, and it is probable that such a board will remain in existence for centuries to come.

In 1840 the Honorable Robert Simpson Jameson, the Honorable Archibald McLean, and the Reverend Henry J. Grasett were named as successors on the board, and it was at this period that funds were first raised for building a new hospital by means of selling the lands held in trust, when a very great proportion of the land endowment was sold for relatively little money.

The first mention of a hospital building under the provision above recalled is dated June 15, 1822, when the records prove that a hospital stood upon a large block of land bounded on the north by Adelaide Street, on the east by John Street, on the south by King Street, and on the west by Peter Street. This block is still known in the City Registry Office as "The Old Hospital Block."

This first recorded building of the Toronto General Hospital was a red brick structure, two storeys high, with accommodation for perhaps fifty patients. In the minutes of the Council it is first referred to as the Town and County Hospital, but later appears to have been designated as the General Hospital for Upper Canada. The value of this building is shown by the record of its being insured for £3,000.

In 1847 the trustees were incorporated by an Act of the Legislature. Increased accommodation was found necessary about 1852 on account of the city's growth, and the Board of Trustees, under the chairmanship of Dr. Christopher Widmer, erected a substantial building upon the vacant land at the extreme east of the hospital property. The more valuable block occupied by the first building was surveyed into lots for renting, and remains intact to the present time.

This second hospital was commenced in 1853—a grey brick building with cut stone trimmings, having a frontage of 165 feet, a depth of 110 feet, and accommodation for about 150 patients. This building stands in good condition to-day, constituting the "Main Building." It was designed after a hospital in Scotland, and cost in the neighborhood of $60,000.

About 1857 the seat of government for the two Canadas was

removed to Ottawa, and Toronto experienced a long period of business depression.

The trustees, owing to lack of revenue, were forced to continue selling the lands originally granted. In spite of these efforts, the more importunate creditors secured judgments against the Trust. Matters reached a crisis in 1863, when the hospital was closed for lack of funds to keep it running.

At this time the late Archbishop Lynch proposed to take over the management of the institution, on the condition of being placed in possession of its property, but the citizens of Toronto vigorously objected, and finally, through the aid of a small grant from the City Council, the more pressing liabilities were discharged, and in 1864 the hospital was reopened.

Financial difficulties continued to hamper the work of the hospital in the following ten years. Of the original land grant of 386 acres but little remained. The Premier of Ontario, then the Hon. Mr. Mowat, induced Senator John Macdonald to accept the chairmanship of the Trust, and Mr. Charles S. Ross, Assistant Receiver-General, was appointed by the Government as one of the trustees. The finances of the hospital from that time continued to improve.

After Mr. Macdonald's resignation in 1875 Mr. C. S. Ross assumed the chairmanship, and inaugurated important financial changes. It was at that time decided that the City of Toronto pay for indigent patients at the rate of 50 cents a day. Those who could pay towards their maintenance were required to do so. The Ontario Government afforded assistance by raising the annual grant, which till then had been $11,000 per annum, to twenty cents a day per patient and a supplementary grant of ten cents a day conditional upon the hospital raising an equal amount.

The Act of Incorporation was amended at this time by the Government undertaking to provide three of the five trustees, one of the others being named by the city and the other by the subscribers.

At this juncture the board received two bequests, perhaps the first in the hospital's history, one for $15,000 from the late Erland Ealandson of Port Hope, a retired Hudson Bay factor;

the other a bequest of $5,000 under the will of the late James Ferrier Gentle of Montreal.

The heating system then introduced is still in use, though the addition of the east and west wings have greatly overtaxed its capacity.

Mr. William Holmes Howland succeeded Mr. C. S. Ross on the board in 1877. In the summer of that year he announced to his colleagues on the board a donation of $25,000 from three prominent Toronto citizens, Messrs. William Gooderham, sr., James G. Worts, and William Cawthra. The west wing was accordingly erected. Later a grant of $10,000 was received from the Government of Ontario for the erection of a wing for treating diseases of the eye, ear, throat and nose. The Burnside Lying-in Hospital was also erected about this date. A special surgical department for females was added to the north. During Mr. Howland's regime the debentures were consolidated by a new issue of $50,000, bearing interest at 6 per cent., the residue of those outstanding being paid off by funds from the sale of lands.

Mr. Howland was succeeded by the Hon. Christopher S. Patterson. The training school for nurses was inaugurated within his period, the first superintendent being Miss Harriet Goldie. In 1887 a special building for the accommodation of nurses was erected at the west end of the hospital, and it is still in use.

In 1888 the Hon. C. S. Patterson was succeeded in the chairmanship by Mr. Walter Sutherland Lee. The rent roll, which in 1876 had stood at but $8,000, now stood at $17,000, owing to the development of the city.

In 1898 the Hospital Board opened an emergency branch at 107 Bay Street, and operated it at great expense until 1906, when it was closed to devote the funds to the regular work.

In January, 1897, the trustees paid off $26,000 of the debentures which had become due. The remainder, amounting to $24,000, were renewed at 4 per cent. for ten years.

On the death of Mr. Lee, in 1902, Mr. Joseph W. Flavelle was elected to the board. Two years later, upon the resignation of Mr. John L. Blaikie, Mr. Flavelle became chairman. Mr. Peter C. Larkin was appointed to the board in 1904, and became

vice-chairman in 1905. Mr. Cawthra Mulock was appointed in place of Mr. George Gooderham at about this period.

Soon after Mr. Flavelle assumed the chair he recommended a completely new plumbing system and drains, new serving rooms and pantries, new bathrooms, lavatories, kitchen, and scullery. These changes were accordingly undertaken, while at the same time plans for the erection of an entirely new hospital were put into consideration. The cost of these new sanitary arrangements amounting to $38,000 was borne by the sale of a block of land on Front Street East to the Canadian Northern Railway for a freight yard.

In September, 1904, Mr. Flavelle announced that Mr. Cawthra Mulock was willing to donate $100,000 for a new general hospital. It was early recognized that such a building should be near the University, and finally the new site was chosen as the block bounded by College, Elizabeth and Hayter Streets and University Avenue, a section of the district known popularly as "The Ward." In 1906 the Ontario Legislature granted the right to expropriate this property, and raised the membership of the Board of Trustees from five to twenty-five. The gentlemen responsible for the new policy of hospital improvement were included in the new board, namely: Mr. J. W. Flavelle, Mr. P. C. Larkin, Mr. M. J. Haney, Mr. Cawthra Mulock, Mayor Thomas Urquhart.

Valuators determined that $550,000 was the amount probably required to buy this land, and the National Trust Company accomplished its purchase between 1905 and 1910, at a total cost of $609,000. The site consists of 10¼ acres in the very heart of the city.

A committee of the board visited the modern hospitals of the United States, and plans of similar buildings were secured from England on February 9, 1910. The plans of Messrs. Darling & Pearson were accepted. The cost was set at $1,000,000, but this figure was soon abandoned, and half as much again is the present estimate. This sum is to be raised by subscriptions to which Mr. J. C. Eaton ha donated the cost of the surgical wing, probably not less than $280,000.

THE ACADEMY OF MEDICINE, TORONTO

The Academy of Medicine was favored with the presence of Dr. Reynold Webb Wilcox of New York at the Seventh Stated Meeting. On that evening Dr. Wilcox delivered a splendid address on "What We Really Know About Tuberculosis." The paper was freely discussed by several of the Fellows present, and the evening spent was a most enjoyable one. The attendance was extremely good, the meeting being held in the Academy's new building, No. 13 Queen's Park, with President Dr. A. A. Macdonald in the chair.

The following are those nominated as officers of The Academy of Medicine for the ensuing year:—

President—Dr. N. A. Powell.

Vice-President—Dr. R. A. Reeve.

Hon. Secretary—Dr. Harley Smith.

Hon. Treasurer—Dr. W. A. Young.

Council—Dr. John Ferguson, Dr. H. A. Bruce, Dr. John Malloch, Dr. Alexander McPhedran, Dr. J. F. W. Ross, Dr. H. J. Hamilton, Dr. Walter McKeown, Dr. F. N. G. Starr.

GOLD-HEADED CANE FOR DR. CAULFIELD

The Toronto General Hospital gold-headed cane competition for the best essay on a medical subject, open to the ex-house staff, was won by Dr. A. H. Caulfield. The presentation was made by Dr. J. F. W. Ross, at the annual dinner, on April 13th, in the Albany Club, of the Toronto General Hospital ex-House Staff Association.

Dr. C. D. Parfitt, Gravenhurst, delivered the annual address, the subject being "Our Present Attitude Towards Tuberculosis." The toast of the hospital was responded to by Dr. Charles O'Reilly and Dr. J. N. E. Brown.

The new officers are: President, Dr. R. M. Hillary, Aurora; Vice-President, Dr. J. N. E. Brown; Secretary, Dr. H. C. Parsons; Treasurer, Dr. N. Yellowlees; Committee, Drs. J. H. Mullin, Samuel Johnston, and Wm. Mabee.

THE CANADIAN ASSOCIATION FOR THE PREVENTIO N OF TUBERCULOSIS

The eleventh annual meeting of the Canadian Association for the Prevention of Tuberculosis will be held in the Hygienic Institute of London, Ontario, on Wednesday, Thursday and Friday, May 17th, 18th, and 19th insts. The opening will take place at 2 p.m. on the Wednesday, and all evening meetings will be held in the Auditorium of the Y. M. C. A. The meeting will be under the patronage of His Excellency the Governor-General of Canada. Dr. J. G. Adami, of Montreal, is President and Dr. G. D. Porter, of Toronto, Secretary. A most interesting programme has been arranged. Among those who will read papers are: Dr. Livingston Farrand of New York, Dr. J. H. Holbrook, Dr. Harold Parsons, Dr. J. H. Elliott, Dr. C. D. Parfitt, Dr. E. C. Shroeder of Washington, D.C., J. W. McCullough, Chief Health Officer of Ontario, and Dr. W. C. White of Pittsburg.

THE VICTOR ELECTRIC CO.'S REMOVAL

The Victor Electric Co., Chicago, announce as follows: "We take great pleasure in announcing to our friends the removal of our general offices and factory from the present location, 55-61 Market Street, Chicago, to our new building, which has recently been erected by us on the northwest corner of Jackson Boulevard and Robey Street, Chicago.

Our moving is now in progress, and we shall be completely installed in our new quarters on or about April 10th.

Our removal to larger and more commodious quarters has a double significance. The rapidly increasing demand for electrical and electrically operated physical apparatus, for diagnosis and treatment, is indicative of the exceedingly important place which these methods have now come to occupy in the medical field. The real merit of these comparatively new therapeutic measures has become so universally recognized as to lift correctly designed appliances for their application from the field of specialized to that of staple commodities.

In no field has competition been keener than in this one, just emerging from the pioneer stage. Unfortunately, this has been a competition rather of price than of quality. The Victor Co., from its inception, has maintained that quality should be the first consideration, both of the manufacturer and of the physician, and for many years the Victor standard of quality has been recognized as by far the highest in its field.

Some twenty years ago this company began business as manufacturers of electro-therapeutic and electro-surgical apparatus. The entire plant occupied a floor space of only about 400 square feet. The growth of the company has been steady, continuous and healthy, and at the present writing the plant occupies approximately 50,000 square feet of floor space, with branch houses in almost all important cities in the United States, and in many foreign countries. The growth and undoubted prestige of Victor products is just one more example of the triumph of good goods and honest methods.

We start business in our new home with greatly increased up-to-date plant facilities, and with our office and field force in a better position than ever to give prompt, accurate and dependable service.

We take this occasion to thank our many friends for the hearty co-operation they have given us in the past, and trust that these cordial relations may continue for all time to come. An urgent invitation is extended to visit us in our new home, where ample facilities have been provided for demonstrating over three hundred up-to-date appliances of proven utility in medical work."

The Physician's Library

Organic Analysis Chart. By W. Harrison Martindale, Ph.D., Marburg, Pharmaceutical Chemist. A Supplement to the Extra Pharmacopeia. 14th Edition. 1910. London: H. K. Lewis, 136 Gower Street, W.C. All rights reserved.

This chart is intended to assist in the recognition of organic chemicals, both natural and synthetic, which are used in the treatment of disease. The tests are arranged in rotation, beginning with the action of heat, with sodium hydrate, and so on from left to right. There are eighteen tests and 319 substances tested. Corroborative tests are given which may be applied to some 200 of these substances. J. J. C.

Differential Diagnosis. Presented through an analysis of 383 cases. By Richard C. Cabot, M.D., Assistant Professor of Clinical Medicine, Harvard Medical School. Octavo of 753 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $5.50 net. The J. F. Hartz Co., Ltd., Toronto, Canadian agents.

This volume by Dr. Cabot is perhaps one of the most important works on Differential Diagnosis that has been published in years.

The book is divided into 23 chapters and covers nearly 750 pages. Chapter 1 deals with "General Consideration of Pain"; Chapter 2 treats of "Headache"; Chapter 3, "Lumbar Pain"; Chapter 4, "General Abdominal Pain." The balance of the volume is devoted to: Epigastric Pain, Right Hypochondriac Pain, Pain in the Left Hypochondriac, Right Iliac Pain, Left Iliac Pain, Axillary Pain, Pain in the Arms, Pain in the Legs and Feet, Fevers, Chills, Coma, Convulsions, Weakness, Cough, Vomiting, Hematuria, Dyspnoea, Jaundice and Nervousness.

The book is one of the most practical that has come under our notice in years, and will be found to be exceptionally helpful to the medical practitioner, whether he specializes or not. We

heartily commend Dr. Cabot's work to our readers and compliment the publishers upon the excellence of their work from a typographical standpoint. W. A. Y.

Syphilis. By Sir Jonathan Hutchinson, F.R.S., LL.D., F.R.C.S., Consulting Surgeon to the London Hospital and to the Royal London Ophthalmic Hospital; Sometime President of the Royal College of Surgeons. New and enlarged edition, with twelve colored and twenty-four black and white plates. 583 pages. London, New York, Toronto and Melbourne: Cassell & Co., Limited. 1909. Toronto: D. T. McAinsh & Co. $3.25.

Sir Jonathan Hutchinson's work is so well known as a standard on syphilis that one feels it unnecessary to more than mention the fact that a new and largely rewritten edition has just come from the press.

There was some delay in publication, owing to a desire to secure the full advantage of the discovery of the spirocheta pallida.

The introduction gives the early history and spread of syphilis so far as known. Syphilis is here treated in a purely clinical manner in all its various forms, and many examples cited in illustration.

Whatever may be the success of new treatments, such as Ehrlich's "606," Dr. Hutchinson's work, from its clinical character and its great wealth of original observations, will long retain its place as a standard on this most interesting subject.

The book contains 583 pages and 36 plates, many of which are colored. M. J. W.

Physiological Principles in Treatment. By W. Langdon Brown, M.A., M.D., F.R.C.P. Baillière, Tindall & Cox, 8 Henrietta St., Covent Garden, London, publishers.

This is one of the most beautifully written books that has been issued. Scientific principles, lucidly given throughout, hold the attention fervently. There are twelve chapters, each one of which gives information on the physiological actions of the various organs, with the rational lines of treatment upon physiological basis. One is amazed at the wealth of knowledge

therein disclosed, and cannot help but drink it in eagerly and wish for a third edition. C. F. M.

Text-Book of Medical and Pharmaceutical Chemistry. By Elias H. Bartley, B.S., M.D., Ph.G. Published by P. Blakiston's Son & Co., Philadelphia, U. S. A. Price, $3.00.

Professor Bartley, in the seventh revised edition of his work on chemistry, has presented to the profession a work of much interest. Its value is enhanced by its masterful and simple style. Desirable and needful information is acquired without wading through pages of padding. The author is too well acquainted with his subject to have recourse to such methods. The work is divided into five parts. Part I. deals with physics. Part II. treats of theoretical chemistry. Part III. gives an account of inorganic chemistry under groupings of associate elements. In Part IV. organic chemistry is discussed in a lucid manner that makes the subject of practical, everyday value. Part V. is concerned with physiological chemistry, the section relating to food and diet, and the dynamic energy of food alone being worth the cost of the book. R. J. R.

Mendel's Principles of Heredity. By W. Bateson, M.A., F.R.S., V.M.H. Publishers: University Press, Cambridge.

The study of heredity has become an organized branch of physiological science, abundant in results and unsurpassed in promise. The practical application of Mendelian principles will probably far exceed any limits we can yet perceive. Among them we can foresee, not merely advances in the art of breeding animals and plants, but a control over the destiny of our own species.

Evolution as a theory of the universe, as it exists, has met with almost universal acceptance. Though Darwin, through the investigations recorded in his Origin of Species, was the first to lay open nature's secrets, so as to win the consent of men everywhere to the reasonableness of his teachings, yet he failed to show where lay the power of variation in the individual, and that the individual variation is transmissible. Weismann's part was to show that the power of variation lay in the primitive germ

cells of the sexual glands and not in the soma. He also demonstrated the untransmissibility of acquired variations.

Of the three propositions essential to Darwin's theory, (1) the power of individual variation, (2) inheritance of variations, (3) and natural selection, the first and second were not indubitably established; his great fame rests securely on the third.

Mendel's (1822-1884) contributions are probably no less valuable in throwing light upon this dark problem of heredity than was the work of Chas. Darwin (1809-1882). His teachings, based at first upon the study of averages in the variation of plants, especially the edible pea, were opposed to such an extent that not till twenty years after his death did justice begin to be done to his work.

In the present author, Bateson, Mendel's writings have found a sympathetic and capable expositor, and those who care to delve into such an abstruse subject will find here a valuable mine of wealth. B. E. M.

Skin and Venereal Diseases. Miscellaneous. Baum Moyer. Practical Medical Series. 1910. Volume IX. Price, $1.25. Chicago: The Year Book Publishers, 40 Dearborn St.

As usual, this yearly volume is up-to-date, covering most of the many important writings of the year. It is especially useful for busy practitioners, as many valuable pointers may be found in a limited amount of reading.

The chapters on Medical Education and the History of Medicine are something entirely new in a book of this kind. Any physician will be well repaid by looking over carefully these chapters. D. K. S.

Compend of Gynecology. By William Hughes Wells, M.D., Associate in Obstetrics in Jefferson Medical College, Philadelphia, etc. Fourth edition, revised and enlarged, with 153 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1911.

This pocket edition is another triumph for Dr. Wells, and being up-to-date in every detail will, without doubt, be readily purchased by medical students and practitioners for ready reference. It contains all the late operations in short, intelligent

form, as well as the medical treatments that have been most successful to the present time. The price of this book is $1.00.

C. F. M.

Stereo-Clinic. By Dr. Howard A. Kelly, Baltimore, Md.

The Southworth Co., of Troy, N.Y., not long ago placed upon the market "The Stereo-Clinic," by Dr. Howard A. Kelly. The name of the author is quite sufficient to guarantee the publishers an immense sale. The work consists of a series of stereo photographs of operations as performed by eminent surgeons throughout the United States. We do not hesitate to say that this is one of the most important works of this kind that has ever appeared in print. So far we have had the pleasure of carefully examining Section X. This section consists of a series of thyroid operations by Dr. Charles Mayo, of Rochester, Minn. Perhaps we cannot express ourselves regarding this section better than to state that any surgeon who has not had an opportunity of seeing a thyroid operation performed in the theatre cannot do better than purchase the "Stereo-Clinic." This important operation is shown step by step from the moment that the incision is made in the skin until the wound is closed by sutures. Section X, however, is no better than any of the other sections of the work.

The "Stereo-Clinic" is in itself a complete work on surgery, and we know of no better investment that can be made.

Memoranda on Poisons. By Thomas Hawkes Tanner, M.D., F.L.S. Eleventh Revised Edition, by Henry Leffman, A.M., M.D., Professor of Chemistry in the Woman's Medical College of Pennsylvania, Professor of Chemistry in the Wagner Free Institute of Science, Pathological Chemist, Jefferson Medical College Hospital. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1911.

This little book is so well known to the profession, and has been so well spoken of for years, that it is difficult to say more than has already been said about it.

This edition, however, has many advantages over the older ones. It is very concise, and the more important words in every clause being put in with leaded type, enables one to grasp instantly the salient points under every head. A. J. J.

Aids to Pathology. By HARRY CAMPBELL, M.D., B.S., Lond., F.R.C.P., Senior Physician West End Hospital for Nervous Diseases, late Physician and Pathologist at the North-west London Hospital. Second edition. London: Bailliere, Tindall & Cox, 8 Henrietta St., Covent Garden. 1911.

A new chapter on diseases of the heart, and much that is new about immunity, are two of the striking features in this edition.

This little work contains in a very concise form much that cannot be found in some of the larger pathologies, and it is not too much to say that to every person who takes any interest in pathology this book will be delightful reading. The author seems to have been fortunate enough to put very clearly, and very specifically, the very points that every man wants thoroughly to understand. A. J. J.

A Text-Book of Veterinary Anatomy. By SEPTIMUS SISSON, S.B., V.S., Professor of Comparative Anatomy in Ohio State University, Columbus, Ohio; Member of the American Association of Anatomists. With 588 illustrations, many in colors. Philadelphia and London: The W. B. Saunders Company. 1910.

The title page of this book gives the fullest expression of its contents. Its systemic topography of treating the subject places it very clearly for the student to become conversant with the anatomy of the animals under consideration. The illustrations are of the highest order, and they will, to a great degree, give assistance to one, either as student, teacher or practitioner, interested in its study.

The aim of the author has been attained, and without doubt it will come to its meritorious position as a standard work for use by institutions requiring same; a want this should fill.

In producing this book much research to present data is presented, which is of much value to those interested in a study of this character.

The newer or latest manner of examination by preparation of

the subject matter gives new light on many of the parts which have come under the observation of the author, hence, this is of great value.

Many words could be expressed favorable of this book. Suffice to say, a valuable one and will be well received.

J. L. O.

Manual of Medicine. By Thomas Kirkpatrick Monro, M.A., M.D., Fellow of and Examiner to Royal Faculty of Physicians and Surgeons, Glasgow; Physician to the Glasgow Royal Infirmary, and Professor of Medicine in St. Mungo's College; formerly Examiner in the University of Glasgow, and Pathologist to the Victoria Infirmary. Third Edition. University Series. Demy 8vo. Number of pages, xxvi.-1023. Illustrations, 42. Price, 15s. net. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden, 1911. All rights reserved.

This is the first copy of Dr. Monro's Manual of the Practice of Medicine which has come under our observation, and we have been very much pleased with it. It is an up-to-date work, giving one the teaching of the most modern authorities in the practice of medicine. Every effort has been made to express the writer's meaning without useless words, and yet to avoid ambiguity, and this has been successfully accomplished. Section X is devoted to Diseases of the Skin—a useful addendum to a work on the Practice of Medicine. It is a handy manual, beautifully printed, and should be popular in schools of medicine. J. J. C.

Psyche. A concise and easily comprehensible treatise on the elements of Psychiatry and Psychology for Students in Medicine and Law. By Dr. Max Talmey, New York, 1910. New York: The Medico-Legal Publishing Company, 55 West 126th St. Price, $2.50.

The author submits that the gradual and steady increase in the frequency of mental diseases and the consequent increased importance to the general practitioner of a more intimate practical acquaintance with the subject are the reasons why he has written the work.

Part I. is devoted to the study of the normal psychical phenomena, and affords a good and sufficient foundation for an

intelligent consideration of the pathological manifestations of cerebral activity.

In Part II. the author deals with the general pathology of mental diseases as illustrated by perversions of the emotions, ideation, will, consciousness, and such psychical anomalies as are frequently observed in nutrition, sleep and motor and sensory reaction.

Part III. has reference to the etiology of insanity, and this part of the subject has been discussed along broad lines and with the comprehensive grasp of a man who understands his work.

Part IV. is devoted to the course and management of the special psychoses, and Part V. deals with the special pathology of insanity.

Dr. Talmey has given the profession a very interesting and readable little work, with much that will be helpful to the physician when cases of mental illness come before him.

N. H. B.

The Practical Medicine Series. Comprising ten volumes on the Year's Progress in Medicine and Surgery. Under the general editorial charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School, and Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the North-western University Medical School. Volume VIII., Materia Medica and Therapeutics, Preventive Medicine and Climatology, edited by George F. Butler, Ph.G., M.D., Henry B. Fevill, A.B., M.D., Norman Bridge, A.M., M.D. Series 1910. Price, $1.50. Price of the series of ten volumes, $10.00. Chicago: The Year Book Publishers, 40 Dearborn Street.

This volume is one of a series of ten issued at about monthly intervals, and is complete for the year prior to its publication on the subjects of which it treats. *The Practical Medicine Series* is published primarily for the general practitioner; but the arrangement in several volumes enables readers interested in special subjects to purchase such parts as they wish.

Speaking generally, it is thought that publications like *The Practical Medicine Series* enable a reader to get, at a small outlay, the cream of the literature of any branch in medicine or

surgery without the labor of looking over many publications. The authors of the present volume, Drs. Butler, Fevill and Bridge, have done their work in an acceptable manner.

J. J. C.

Biology. General and Medical. By JOSEPH MCFARLAND, M.D., Professor of Pathology and Bacteriology, Medico Chirurgical College of Philadelphia. Octavo of 440 pages, with 160 illustrations. Philadelphia and London: W. B. Saunders Company. 1910. Cloth, $1.75 net. Canadian Agents: The J. F. Hartz Co., Ltd., Toronto.

The subject of biology is one which has claimed but little attention in the profession at large. Many may have wished to gain a more intimate knowledge, but have had neither the time or courage to wade through large and often obstruse volumes on the subject. To such as these, this work by Prof. McFarland will be welcome indeed. The early chapters deal with the history of biology and the various theories of the origin of life. The fundamental characteristics of living matter are next discussed, and life is traced from the monocellular type up through the various stages to the top of the scale—man himself. Following this, and completing the volume, are several chapters on Blood Relationship, Infection, Immunity, Inheritance, Senescence and Death, which are of special interest to the medical reader. The whole is written in a very pleasing style, and anyone interested in biology and its relation to medicine will find it well worth reading.

P. K. M.

Essentials of Histology. PROF. E. A. SCHAFER, M.D., D.Sc., LL.D., F.R.S. Eighth edition. Longmans, Green & Co.

The present edition shows a marked improvement over the seventh edition, which appeared some two years ago. The subject matter has been slightly revised, but the chief advance has been in the matter of illustration. These now number over six hundred. Many are made directly from microphotographs of tissue, and are exceedingly clear and distinct, those in color being especially good. The work is divided into fifty or more chapters, each dealing with a particular organ or tissue. The descriptions are not lengthy, but are as complete and comprehensive as a

book of this size demands. Primarily the volume is intended as a student's hand-book and laboratory guide, but it will form a valuable addition to the library of any busy and up-to-date physician. P. K. M.

Text-Book of General Bacteriology. Prof. E. O. Jordan. Second edition. Philadelphia: W. B. Saunders Co.

The first edition of this work appeared only two years ago, and so well known has it become in that short time that it scarcely needs any further introduction. The general interest in bacteriology has increased greatly in those two years, however, and the recent advances along the lines of laboratory and clinical investigation have necessitated this second edition. We do not expect completeness in a work of this size, but we feel that more space might have been given to the subjects of immunity and serum diagnosis, in view of late developments in these branches. The work is intended as an introduction to the subject of bacteriology and is well written throughout. For those desiring a more complete knowledge of various branches, a comprehensive bibliography is appended. P. K. M.

Confidences. Talks With Young Girl Concerning Herself. By Edith B. Lowry, M.D. Chicago: Forbes & Co. 1910.

In the preface of this dainty little volume we read: "With the desire to aid mothers in giving the necessary instruction to their daughters, this little book has been written. The author has tried to tell in suitable language the facts that should be known by every girl from ten to fourteen years of age."

The author then goes on to discuss matters which many old-fashioned people at least might think better left alone. They probably would ask, "Is it necessary that girls at this age should have so much explained to them?" Modesty can easily be taught by a mother to her daughter during infancy and girlhood without interfering with her daughter's innocency which she should study to preserve. To mothers who consider knowledge of this character beneficial, this book can be recommended. Subjects that are difficult to explain are touched upon more tenderly and perhaps with altogether better tone than one generally finds in books of this kind. As a mere guide to a mother perhaps the

book is of value. It certainly might suggest to the minds of some mothers a delicate way of introducing and discussing a subject that unfortunately seems too often to be neglected.

A. J. J.

The Care and Training of Children. By Le Grand Kerr, M.D., Brooklyn, N.Y. Publishers: Funk & Wagnalls, New York. Price, 75c.

It cannot be said that this book contains anything new, but it presents this subject clearly, and the information supplied is much needed in many homes.

There is little doubt that the constantly increasing number of city and town dwellers is detrimental to family life. It has been frequently asserted that children in Canada fall short in the matter of good breeding.

From various standpoints this would be a good book to put into the home. B. E. M.

The Practical Medicine Series. Volume V., Obstetrics. Edited by Joseph B. DeLee, M.A., M.D., Professor of Obstetrics, Northwestern University Medical School. Chicago: The Year Book Publishers, 40 Dearborn St.

Another volume of this excellent series on obstetrics has just been published, giving the current year's progress in this subject. Those who have been fortunate to secure copies in the past must appreciate the appearance of this 1910 book.

C. F. M.

Heaton's Annual. The Commercial Handbook of Canada and Board of Trade Register. Seventh year. 1911. Edited by Ernest Heaton, B.A. (Oxon.), barrister-at-law, and J. Beverly Robinson. Canadian Edition. One dollar. Published by Heaton's Agency, Toronto.

This book is indeed a *multum in parvo.* Its contents include an official directory of the Dominion and Provincial Cabinets and Members of Parliament, Senate, etc.; rates of postage, parcel post, etc.; financial information; commercial regulations; customs information, and a hundred and one other facts of interest. To the medical profession, the section appearing under "Professions," from pages 337 to 346, inclusive, is of immediate in-

terest. This section gives a great deal of information regarding physicians and the regulations covering the practice of medicine in the different provinces, as well as other extensive data. This handbook is well worth the price charged for it by the publishers.

State Board Questions and Answers. By R. Mas Goepp, M.D., Professor of Clinical Medicine at the Philadelphia Polyclinic. Second Edition, thoroughly revised. Philadelphia and London: W. B. Saunders Company. 1911. Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

To any medical man interested in the teaching of students this volume will be found of the greatest value. The material has been selected from State Board questions as put by the different examining bodies during the past four years, and from it can undoubtedly be culled a great deal of data most useful to a teacher in the different branches of medicine. The author, in the second edition, has thoroughly revised his work issued a few years ago.

Christian Science in the Light of Holy Scripture. By I. M. Haldeman, author of "How to Study the Bible," "The Coming of Christ," etc. New York, Chicago, Toronto: Fleming H. Revell Company, London and Edinburgh.

Anyone desiring to know the true fallacies of Christian Science from the Scriptural standpoint should purchase a copy of this work. It is most conclusive and proves once and for all that Christian Science is absolutely contrary to Biblical teaching, and cannot be credited by anyone possessing the most ordinary intelligence.

Makers of Man; a Study of Human Initiative. By Charles J. Whitby, M.D. (Cantab.), author of "The Logic of Human Character," "The Wisdom of Plotinus," etc., etc. With forty-seven half-tone and other plates. New York: Rebman Company, 1123 Broadway.

In this book the author deals "with the lives of great men as problems capable, through and through, of psychological treatment and elucidation." He has chosen for his subjects the

lives of forty world-famous individuals, including Caesar, Charlemagne, William the Silent, Sir Francis Drake, Cardinal Richelieu, Oliver Cromwell, Frederick the Great, Lord Nelson, Napoleon, Abraham Lincoln, Dante, Leonardo Da Vinci, Titian, Cervantes, Mozart, Goethe, Beethoven, Sir Walter Scott, Turner, and many others well known in history. The book is divided into thirteen chapters, and will be found to contain much that is of interest from both the biographical and psychological standpoint.

A Text-Book of Surgical Anatomy. By William Francis Campbell, M.D., Brooklyn, New York, Professor of Anatomy, Long Island College Hospital; Attending Surgeon to the Methodist Episcopal, Swedish and Bushwick hospitals; Consulting Surgeon to the Jamaica Hospital. Second Edition, Revised. With 319 original illustrations. Philadelphia and London: W. B. Saunders & Company. Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

The second edition of Dr. W. F. Campbell's "Text-Book of Surgical Anatomy" is the result of most careful revision. It must be most gratifying to any author to be called upon in so short a time to rewrite a book, and we congratulate Dr. Campbell upon the outcome of his efforts. His Text-Book is a Practical Anatomy, and presents anatomy in its most attractive form to the surgeon. It is indeed "a presentation of anatomic facts in terms of clinical value."

A Handbook of Practical Treatment. By Many Writers. Edited by John H. Musser, M.D., LL.D., Professor of Clinical Medicine in the University of Pennsylvania, Philadelphia, and A. O. J. Kelly, A.M., M.D., Assistant Professor of Medicine in the University of Pennsylvania, Philadelphia. Volume II. Philadelphia and London: W. B. Saunders Company. Canadian Agents, the J. F. Hartz Co., Ltd., Toronto.

Among the contributors to volume II. of this splendid work we find such names as Sir Clifford Allbutt, Professor L. F. Barker, of Baltimore; Dr. Jos. C. Bloodgood, also of Johns Hopkins;

Dr. Rufus I. Cole, of the Rockefeller Institute; Prof. G. E. De Schweinitz; Dr. Hobart A. Hare, of Philadelphia; Dr. J. E. Goldthwaite, of Boston; Prof. C. F. Martin, of Montreal, and Dr. Alfred Stengel, of Philadelphia. Volume II. covers 800 or more pages. Our esteemed fellow-countryman, Prof. L. F. Barker, whom the Fellows of the Academy of Medicine, Toronto, had the pleasure of listening to a few weeks ago, contributes three most excellent chapters on Cerebro-Spinal Fever, Cholera Asiatica, and Plague, and Dr. C. F. Martin, of Montreal, a short article on Gonococcic Infection. The opening article on Diseases of the Cardiovascular System is from the pen of Sir Clifford Allbutt. These contributions alone are worth the price of the book, and we wish that space would permit of a much more lengthy review.

A Handbook of Obstetric Nursing, for Nurses, Students and Mothers. By ANNA M. FULLERTON, M.D., Clinical Professor of Gynecology in the Woman's Medical College of Pennsylvania. Seventh revised edition, illustrated. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1911. Price $1.00 net.

We congratulate Dr. A. M. Fullerton upon being called upon to publish no less than seven editions of her Handbook of Obstetric Nursing. The seventh edition has been carefully revised and has been added to by two new chapters, one on "The Examination During Pregnancy" and the second on "Obstetric Operations," with considerable other additions to the text under Eclampsia, Ophthalmia Neonatorum, and the Care of Premature Infants.

Medical Service in Campaign. A Handbook for Medical Officers in Field. By MAJOR PAUL FREDERICK STRAUB, Medical Corps (General Staff), United States Army. Prepared under the direction of the Surgeon-General, United States Army, and Published by authority of the War Department. Illustrated. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1910.

This is a small book of 160 pages, which endeavors to record some of the improvements in the Army Medical Corps, United

States, which followed the war with Spain. The book is interestingly written, and will no doubt be of considerable value in the Medical Military Service of the United States Army. While the reviewer does not agree with everything the book says, and sees many disadvantages in the methods as applied to actual warfare, he heartily concurs in everything that is said with reference to the importance of military sanitation. This feature in the book is made especially prominent, and from the standpoint of preventive medicine is the most important of all.

J. T. F.

Diseases of Children, for Nurses, including Infant Feeding, Prophylaxis, Hygiene and Nursing. By ROBERT S. MCCOMBS, M.D., Assistant Physician to the Dispensary, and Instructor of Nurses at the Children's Hospital, of Philadelphia. Illustrated. Second edition, thoroughly revised. Philadelphia and London: W. B. Saunders Co. 1911. Canadian agents, The J. F. Hartz Co., Ltd., Toronto.

This book, since its first appearance, has been not only thoroughly revised, but considerably amplified, especially the chapters on Intestinal Diseases, Therapeutics and Artificial Feeding. There are but few books on children's diseases written for nurses, and this is one of the good ones. It is so written that any nurse of average intelligence should be able, after carefully reading it, to know "what symptoms to expect and what complications to guard against."

Accidental Injuries to Workmen, with reference to Workman's Compensation Act, 1906. By H. NORMAN BARNETT, F.R.C.S., author of "Legal Responsibility of the Drunkard," etc. With article of Injuries to the Organs of Special Sense by CECIL E. SHAW, M.A., M.Ch. M.D.; Lecturer on Ophthalmology and Otology, Queen's University of Belfast. And Legal Introduction by THOMAS J. CAMPBELL, M.A., LL.B., Barrister-at-Law. New York: Rebman Company, 1123 Broadway.

This book will be found more than usually interesting to those of our readers identified with an insurance company. Of recent years the subject of Workmen's Compensation has come to the

front, especially so in Canada. This volume pays a great deal of attention to this phase of the question of accidental injury, and we would recommend any physician interested in insurance to purchase the book, as it is well worth the price charged by the publishers, namely $2.50.

American Red Cross Abridged Text-Book on First Aid, Industrial Edition. A Manual of Instruction. By MAJOR CHARLES LYNCH, Medical Corps, United States Army, and 1st LT. M. J. SHIELDS, Medical Reserve Corps, United States Army. With 49 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1911.

This little book will be found most useful, especially to those interested in First Aid or Ambulance Work. It is divided into ten chapters, and contains a number of good illustrations.

Hints for the General Practitioner in Rhinology and Laryngology. By DR. JOHANN FEIN, Privatdocent at the University of Vienna. Translated by J. BOWERING HORGAN, M.B., B.Ch., Late House Surgeon at the Hospital for Diseases of the Throat, Golden Square, London W. With forty figures in the text and two photographic plates. New York: Rebman Company, 1123 Broadway.

This is a small book of some 225 pages which attempts to give a limited knowledge to the general practitioner on Nose, and Throat diseases rather than try to teach him extensively regarding methods which he is unable to properly apply. The classification adopted in the book is very practical and useful in that the diseases are classified according to the most striking symptoms which they represent. Those diseases which may be satisfactorily treated by the general practitioner are elaborated upon while those belonging entirely to the specialist are considerably curtailed. The book is totally different from most books on nose, throat and ear. From the general practitioner's standpoint it is well that this is so. Oftentimes books written for the general practitioner contain much that he cannot be expected to be familiar with, and therefore not a measure of usefulness to him, and at the same time does not reach that degree of com-

pleteness that is expected by a specialist. This small book is not written for the specialist at all, and does not pretend to give everything for the general practitioner. The author has succeeded very well in giving a lot of information on practical lines that would be of very great help in one's every-day practice.

P. G. G.

The Official Announcement of the University of Vienna.

The Rebman Co., with offices at 1123 Broadway, New York, are anxious to have the attention of the Canadian medical profession called to The Official Announcement of the University of Vienna, as recently published in German, English and French. This firm will be glad to send a copy to any medical practitioner on receipt of a postcard.

The post-graduate work being done by the Medical Faculty of Vienna University is the very best. The course consists of lectures and practical work.

The announcement makes quite interesting reading, especially to those who know of the work being done at German universities.

Inebriety. A Clinical Treatise on the Etiology, Symptomatology, Neurosis, Psychosis and Treatment, and the Medico-Legal Relations. By T. D. Crothers, M.D., Supt. Walnut Lodge Hospital, Hartford, Conn.; Editor of the *Journal of Inebriety,* author of "Morphinism and Narcomania," "Drug Habits and Their Treatment," etc. 1911. Cincinnati, Ohio: Harvey Publishing Company.

We wish to take this opportunity of congratulating our friend, Dr. T. D. Crothers, on his work on "Inebriety." There are few men in the United States who have had so many years of experience in the treatment of inebriety that Dr. Crothers has had, so that any work of his on this important subject will at once receive a hearty reception, not only in the United States, but in the Dominion of Canada, where Dr. Crothers has many friends. This volume consists of nearly 400 pages. It is exceedingly practical, the subject being presented from a strictly scientific standpoint. The treatment of inebriety has become in these latter days one of the most important duties of the average

medical practitioner, and, after looking over Dr. Crothers' book, we can honestly say that it will be the means of materially advancing one's knowledge on this important subject.

Phases of Evolution and Heredity. By DAVID BERRY HART, M.D., F.R.C.P.E. New York: Rebman Co., Publishers, 1123 Broadway.

It has now become orthodox to accept evolution as a satisfactory hypothesis of creation. It is a long cry, however, from the robust, virile and epoch-making observations, propositions and deductions made by Darwin, Wallace and some of their contemporaries to the prevailing differentiations and observations made half a century later by those who swim with the current because that course is now conventional.

This work aims to explain the mode of transmission of hereditary characteristics. The author follows closely the observations and results of Mendel as elucidating the fundamentals laid down by Darwin. B. E. M.

The Practice of Surgery. By JAMES GREGORY MUMFORD, M.D., Visiting Surgeon to the Massachusetts General Hospital, Instructor to the Harvard Medical School, Fellow of the American Surgical Association, etc. Octavo 1015 pages, 682 illustrations. Philadelphia and London: W. B. Saunders. 1910. Cloth, $7.00 net; half-morocco, $8.50 net.

The first three parts of the book are devoted to a consideration of the Surgical Diseases of the Abdomen, and the fourth part deals in a similar manner with the Surgical Diseases of the Chest. In describing the technique of operations upon the lungs the writer expresses the opinion that in the near future it will become a routine procedure to employ some form of pulmonary pressure apparatus in all cases in which the chest is opened, and he believes that the Sauerbruch pneumatic cabinet is the most efficacious which has up to the present been designed for this purpose. Part V. is devoted to operations upon the face and neck, whilst Part VI. deals with those upon the head and spine. In this latter section he deprecates the present custom of first referring surgical diseases of the nervous system to a neur-

ologist, leaving him to subsequently refer the case to a general surgeon for operation, and expresses the opinion that in this connection our best hope for the future is in the surgeon who is also an expert in neurology. The many excellent illustrations add considerably to the value of the work. It is a thoroughly up-to-date and concise presentation of the most approved methods in clinical surgery, and will be found most useful for the young surgeon, as well as for the student preparing for his final examination. H. A. S.

After-Results of Abdominal Operations. By ARTHUR E. GILES, M.D., B.S.C., London, F.R.C.S. Edinburgh. London: Bailliere, Tindall & Cox.

It is very interesting to see an operator follow up the after-results of his work. In this case the experience is based upon a series of 1,200 cases. The operations include salpingo oophorectomy for tumors, both unilateral and bilateral; for inflammatory diseases, both unilateral and bilateral, and for extra-uterine pregnancy, both unilateral and bilateral; hysterectomy for carcinoma and hysterectomy from other causes, myomectomy, hysteropexy, for flexion, version, prolapse and procidentia.

The operator concludes that in about 3.6 per cent. of the cases a hernia develops in the wound. This is more frequently the case when operation has been performed for inflammatory disease, owing no doubt to the infection of the wound. The tendency of extra-uterine pregnancy to occur a second time in the same patient is pointed out. It is noted that after unilateral salpingo oophorectomy 9.5 per cent. required subsequent operation, while 8.3 per cent. out of a total of 770 cases required further operations.

After looking carefully through the work, one comes to the conclusion that the reason that 30 per cent. of the whole remain invalids or semi-invalids for twelve months or longer after operation is that so many cases of hysteropexy are included in the list. It is well known that many of these cases are of the neurotic type and are not likely to be benefited by operation.

Dr. Giles deserves the thanks of the profession for the manner in which he has put his experience at their disposal.

Military Sanitation and Hygiene. By E. Blake Knox, B.A., M.D., D.P.H. (Hons.), Captain R.A.M.C. London: Bailliere, Tindall & Cox, 9 Henrietta St., Covent Garden. Crown octavo, pp. 346. 5 shillings net. 1911.

For some years back attention has been directed to the marvellous improvement that has been steadily taking place in the health and physical efficiency of the British Army in all parts of the world. Unrelieved by public encouragement, the Royal Army Medical Corps has been carrying on silently and unobtrusively reforms in the prevention of disease, whereby the incidence of sickness has been so reduced that many of the military hospitals have had their bed accommodation considerably lessened. Napoleon was content to lose men by the hundred thousand through neglect of health, but the combatant officer of the present day knows well that the number of men he can muster depends on the thoroughness or otherwise by which the methods advised by the medical branch of the army are carried out. Not the least of the services rendered to the country at large by the training of the 40,000 or 50,000 men annually of our Canadian Militia lies in the enforced, though very gradual and as yet partial, attention paid by the authorities to the sanitation of the camps. Only those who knew conditions as they were, say ten years ago, and as they are now, can grasp the advances made, or realize how widespread will be the gain to the populace at large from the practical example set before the eyes of the rank and file in camp sanitation and conservancy arrangements.

The writer has never seen in so compact a form so much of what is essential and useful on this subject as in this book of 346 pages. The table of contents is as follows:

1. Medical Inspection of Troops in Barracks. The Sanitary Inspection of Barracks.
2. Military Barracks.
3. Disposal of Excreta and Sewage from Barracks.
4. Camp Sanitation.
5. Conservancy and Other Arrangements for Camps.
6. Water Supplies in Camps.
7. The Food of the Soldier.
8. Clothing, Equipment and Bedding.

9. Marching.
10. Physical Efficiency.
11. Disinfection and Infectious Diseases.
12. Sanitary Reports.

Appendix, Examination Papers, etc.

The work is far and away the most suited to the needs of our Canadian medical services which the writer has seen, and should be in the hands of every medical officer, as well as first on the list of his prescribed manuals and text-books.

J. T. F.

Case Histories in Pediatrics. A collection of histories of actual patients, selected to illustrate the diagnosis, prognosis and treatment of the most important diseases of infancy and childhood. By John Lovett Morse, A.M., M.D., Assistant Professor of Pediatrics, Harvard Medical School; Associate Visiting Physician at the Infants' Hospital and at the Children's Hospital, Boston. Published by W. M. Leonard, Boston.

The author, by adopting the simple plan of selecting from a large collection histories of typical cases, has produced a most instructive and interesting volume.

The method pursued by the writer is not only useful in furnishing examples of the various diseases, but also illustrates admirably the method of arriving at a diagnosis.

Following the description and differential diagnosis are chapters devoted to prognosis and treatment.

The cases are grouped under thirteen headings.

The classification indicates the wide scope of the work. Sections are devoted to: Diseases of the New-Born; Nutrition; Specific Infectious Diseases; Throat, Nose, Ears and Pharynx; Diseases of the Bronchi, Lungs and Pleura; Heart and Pericardium; Diseases of the Liver, of the Kidneys and Bladder; Diseases of the Blood; of the Nervous System; and finally, of Unclassified Diseases. There are one hundred cases in all.

The author considers the method of case-teaching to be much more valuable than didactic lectures, and second only to bedside instruction to a limited number of students. In this opinion we are disposed to agree with him. Certainly, in his hands, it has resulted in the production of a most readable and valuable book.

Messrs. Bailliere, Tindall & Cox announce that the new edition of Green's "Pathology" will be ready for publication by the end of the month. It has again been revised by Dr. Bosanquet, much new material added, and re-arrangement of subjects made. Its format has also been modified for inclusion in the well-known "University Series of Manuals," which contains such popular volumes as Rose & Carless' "Surgery," Stewart's "Physiology," Monro's "Medicine," Jellett's "Midwifery," Buchanan's "Anatomy," Turner's "Medical Electricity." The price will be 15s. net instead of 18s. net as hitherto.

*THE PATHOLOGICAL ASPECTS OF INTESTINAL FERMENTATION

When we refer to intestinal antisepsis we mean, of course, a limited antisepsis directed against putrefactive and other pathogenic germs.

Under ordinary circumstances nature supplies us with the means of preventing the intestinal canal becoming the habitat of undesirable organisms. The action of the digestive juices on the one hand and prompt evacuation of the post-digestion residues on the other, afford sufficient protection against a pathological multiplication of organisms accidentally present. When for any reason digestion is delayed or imperfectly carried out, and when, owing to muscular paresis, the imperfectly digested contents are allowed to stagnate in the intestine, irregular fermentations take place with the formation of toxins the absorption whereof is gravely prejudicial to health.

These irregular fermentations give rise to symptoms of intestinal dyspepsia with the formation of gaseous, acid and toxic products, and these not only determine local symptoms of irritation, but by the passage of the soluble products into the blood set up disturbances in distant organs—the nervous system, and the skin.

The object of the Lactobacilline treatment, as defined by Professor Metchnikoff, is therefore to control intestinal fermentation along with the micro-organisms that cause it, without intro-

*Publisher's Department.

ducing any toxic products into the body and without interfering with the normal bacteria of the canal. This complex therapeutical problem has been solved by the introduction of Lactobacilline since both experimental and clinical data confirm the theoretical assumption based on the observed anti-putrefactive action of nascent lactic acid.*

**THE USE OF GRAPE JUICE IN THE SICK ROOM

There are perhaps few physicians who have not frequently been at a loss as to the best kind of diet to be adopted in cases of typhoid fever, gastric inflammation and similar diseases. It is frequently very puzzling to know just what will agree with such a patient best, especially in gastritis and other conditions where vomiting is a prominent symptom. There are a large number of people who cannot digest milk in any form. In several parts of Germany and Austria, of recent years, "Grape Cure" establishments have been opened for the treatment of just such cases, and, judging from statistics, this form of treatment has been most successful. Grape Juice, when properly made, will be found to be an exceedingly effective form of diet in many cases. It is mildly stimulating in character, nourishing and palatable. When administered iced, it will be found most refreshing, and is found that many patients will improve when fed upon no other form of diet.

A grape juice that has recently been placed upon the market, and which will be found to be absolutely pure and in no way fortified with alcohol, is that bottled at Winona, Ontario, by E. D. Smith. The manufacturer is anxious to bring his grape juice under the immediate notice of the medical profession generally throughout this country, and physicians are respectfully requested to specify this particular brand when ordering for patients. It can be procured at almost any drug store or direct from the manufacturer.

*For a free sample box of Lactobacilline Tablets, the profession are invited to apply to the sole Canadian agent, Mr. Kelly Evans, 64 Wellington Street West, Toronto.

**Publisher's Department.

The Canadian Journal of Medicine and Surgery

A Journal published monthly in the interests of Medicine and Surgery

Vol. XXIX TORONTO, JUNE, 1911 No 6

Original Contributions

STRANGULATED HERNIA

BY WALLACE C. ABBOTT, M.D., CHICAGO, ILL.

Here and there a morsel of the modern scientific use of modern scientific drugs is taken up, and the finder rejoices in the possession of a gem. This is the case with the treatment of hernia by the use of hyoscyamine, which has won many encomiums of late. For this we are indebted to that wise old Emeritus Professor of Surgery of the University of Ghent, to whose memory the medical profession will one day do late justice. Burggraeve gave us this method, and his disciples recorded many instances of its successful application. Some examples of these I propose to adduce herewith.

D'Albas reported a case of acute inguinal hernia, strangulated, with cruel suffering and fecal vomiting. Two hours' taxis failed to accomplish reduction. The sensitiveness becoming extreme, further attempts were postponed, and hyoscyamine with strychnine arsenate given, a half-milligram of each every hour. On the next morning the state was much the same, but with less vomiting. He had taken eight milligrams of hyoscyamine. Half an hour's taxis failed. The granules were ordered every half hour. At five p.m. the patient was easier, had vomited but once since morning, but his prostration was extreme. The tumor seemed smaller. Taxis again failed.

3rd day. The prostration was unchanged, face shrunk, pulse

small, nausea, but no vomiting; the abdomen seemed prominent, the tumor smaller. Some gas had passed *per anum.* Passing the hand lightly over the tumor it was felt to slip into the abdominal cavity, although obscured by the local tenderness and edema, and the flatulent distention of the abdomen. The symptoms indicated a local peritonitis becoming generalized. Camphor and belladonna were applied locally, with absorbent cotton and a bandage to exert slight compression, continuing the hyoscyamine and strychnine, a dose of each every hour.

No change being manifest next evening the patient was also given Gregory's salt, two milligrams every half hour.

4th day. Much depressed; fever; thirst intense; a copious stool reassured as to the hernia. Prescribed veratrine, a half milligram every half hour for fever; citric lemonade; continued remedies as before.

5th day. Evidently better; less prostrate; replies to questions; fever down; pulse better; abdomen ballooned, but less tender; had slept most of the night. Replaced veratrine by quinine hydrofer., two centigrams every hour, with hyoscyamine and strychnine arsenate.

By the eighth day the hyoscyamine hallucinations showed the time had come to stop it, the improvement having been steady; replaced it with strychnine sulphate, a half milligram, and acid phosphoric, a centigram, each every hour. From this time he recovered without notable incident.

Passing the home of a client, D'Albas heard the cries of a child four months old. Going in, he found it with a hernia that he could not reduce. He gave it two half milligrams of hyoscyamine, an hour apart. Returning four hours later he found the infant free from pain, and slight pressure sufficed to return the gut. The strangulation had subsided.

Burggraeve tells of a man at his hospital clinic, with irreducible inguinoscrotal hernia of four days' standing; stercoral vomiting; pale; skin cold; the tumor not gangrenous. The pupils were contracted; and on this hint he gave three half milligrams of hyoscyamine, and told his class that when the pupils dilated the hernia would reduce. A sort of religious silence ensued; it was felt that something extraordinary was impending. Three milligrams had been taken, when the iris disappeared; the professor laid his hand on the tumor, which, under slight pressure,

disappeared with gurgling. Taxis is useless in presence of spasm.

Barrère gave hyoscyamine for an inguinal hernia that resisted taxis; it failed, and an operation showed that plastic deposits had glued the sac to the hernia so as to render reduction impossible. Traumatic fever arose, but quickly subsided under the defervescent alkaloids, lasting just six hours.

Berruyer's case was a laundress, aged 42, with irreducible crural hernia and fecal vomiting. A half milligram of hyoscyamine was given every quarter hour, one-half milligram of strychnine every half hour. The pain and vomiting were relieved before night. On the fourth day the hernia reduced spontaneously, and on the fifth she was at her work.

Birabent's patient was a man, aged 68, with an umbilical hernia, forty-eight hours strangulated. The patient had suffered extremely, was collapsed, stupid and delirious, with fecal vomit, etc. Hyoscyamine and strychnine were given, a half milligram each every ten minutes. Relief was evident in two hours, and at 10 p.m. the hernia had retired and all was well.

Burggraeve had a case in which a painter, struggling with lead colic, forced out a small umbilical hernia. Kelotomy was done, and hyoscyamine given until the spasm relaxed.

Decoin tells of a woman, aged 42, with irreducible crural hernia, fecal vomit, etc. He gave strychnine and hyoscyamine, also castor oil. At 11 p.m. the hernia returned to the abdomen and the woman was cured.

Cordain gave a negro with inguinal hernia twenty-three half milligrams hyoscyamine, twelve each of strychnine arsenate, morphine hydrobromide and cicutine hydrobromide, eighty grams castor oil, seven enemas, and five centigrams camphor monobromide, within twelve hours. The hernia was then reduced spontaneously.

Lemarie reports a man brought to the hospital to die, with an inguinal hernia three days irreducible, fecal vomit, etc. Taxis had failed, and he refused operation, which was also considered hopeless. The state of the heart forbade chloroform. He got in one day thirty half milligrams each of hyoscyamine and strychnine, three grams chloral, and an ounce of syrup of morphine; reduction was then effected with ease: and next day he was discharged, a well man.

DaCunha's patient was a man, aged 70, with an old scrotal hernia, which he at last failed to reduce. After eight half milligram doses of hyoscyamine and eight of strychnine, one each every quarter hour, the reduction was easy.

Burggraeve also records an old inguinal hernia that became irreducible and inflamed. Reduction was effected, but the pain remained, and fever developed despite the application of ice. Aconitine and veratrine were given, a half milligram each every quarter hour, and by evening the temperature fell and pain lessened. Quinine hydrofer. was given to prevent return of fever, and the bowels were moved by enemas of oil and salt.

Ternisien's patient had suffered with hernia ten years, an abscess and false anus having formed once and closed. A strain forced out an enormous crural protrusion. Under hyoscyamine and strychnine this reduced spontaneously. Some days later the accident was repeated, and the patient announced that this time she would die; nevertheless two hours of the above treatment sufficed to induce the return of the mass.

Roubinet, Mesnard and Declercq reported similar successes. These seemed to be gained in shorter periods, as the hyoscyamine was given in larger doses. Declercq gave his patient forty-two granules of one-half milligram each, or about one-third grain. It is evident that the hyoscyamine of the French dosimetrists is a different body from that employed in America, where few patients can take one milligram without displaying the full toxic effects.

These reports show what could be done, before the days of antiseptic surgery, by the proper use of well-selected remedies, always given "to effect," to relieve the muscular spasm causing strangulation of the gut. There can be no doubt, in my opinion, that an intelligent use of the same remedies to-day will save many a patient from the necessity of surgical intervention, and save many a life. Where the case is an urgent one, where there is stercoraceous vomiting and the symptoms of shock, an injection of hyoscine, morphine and cactin should be given at once, and after the patient is well under its influence gentle efforts at taxis should be resumed. If these fail, then the case becomes one for the immediate intervention of the surgeon, and he is already well prepared for the knife

In these days, no such delays as those practised by D'Albas would be tolerated. Strangulated hernia is too critical a condition. It is the duty of the physician to give relief in the shortest possible time, since prolonged strangulation means gangrene of the bowel, which in the vast majority of cases is followed by death. Delay means danger, while the surgeon who sees these cases early can relieve most of them.

But these reports do illustrate the enormous potency, the exceeding value, of well-selected remedial agents, of which hyoscyamine stands near the top, when intelligently administered.

A CASE OF CLINICAL INTEREST

BY HERBERT W. BAKER, M.D., TORONTO.

Mr. Chairman and Gentlemen:—

The case which I have been invited to report to you to-night is of one James Douglas, aet. 28, a teamster, who came to St. Michael's Hospital complaining of pain and swelling of the anterior part of his right foot and third toe. Three days previous it had been pinched under a load of iron. The swelling was very much inflamed. Over the metatarsal bones it was soft, but the middle toe was cartilaginous in consistency and about the size of a small egg. He gave the following history:

Five years ago, while playing football, he had been stepped on, resulting in an injury to the third toe of his right foot. He was able to finish the game, but that night he noticed that it was red and swollen. Three days later a "bone doctor" told him it was dislocated and advised him to paint it with iodine. The swelling increased, and soon the toe was half as big again as normal. At first it was soft, but later it became hard and bony. The toe was flexed and the phalangeal joints were immovable. It has been continually increasing in size till at the present time it is as big as a hen's egg.

After three days' rest the inflammation subsided and the humor could be more easily examined. It extended from the metatarso-phalangeal joint to the proximal end of the distal phalanx. It was hard and elastic, about the consistency of cartilage. There was no fluctuation. It was attached closely to the bone, but the skin moved freely over it. The phalangeal joints were stiff.

On account of its slow growth, malignant disease, such as chondrifying sarcoma, was out of the question. Its consistency and lack of fluctuation ruled out tuberculosis. Its elasticity ruled out osteoma and suggested chendroma.

On this diagnosis the toe was amputated at the metatarso-

* Read before the Section of Pathology, Academy of Medicine, Toronto, February 22, 1910.

phalangeal joint. After hardening in formation it was split in the middle line, as you may see in the specimen.

On examination one saw the first and second phalanges had been included in the tumor. The joint cavity between them was still intact. The proximal phalanx is almost twice its normal length, and about its centre there is a constriction, probably where a fracture took place five years ago. Most of the phalanx at present consists of cartilage, but there are a few specials throughout the mass that have become calcified or ossified.

The tumor in the second phalanx appears to be growing from the centre upward, and the lower part of the bone still remains.

In only one place could I find any mention made of chondromata following fracture. Magrath says they are sometimes due to some irregularity in the reparative process after such an accident.

The other most important etiological factor suggested is an irregularity in post foetal development of bones as in rachitis. In this case islands of cartilage remain in the bone, from which tumor formation occurs. In this connection Sir Frederick Treves says: "Individuals with multiple chondromata often present evidences of rickets, and it is a curious circumstance that the tissue of a chondroma resembles histologically the bluish translucent cartilage so characteristic of a rickety epiphyseal line."

Treves and Bland Sutton both say they are always encapsuled. In this case it would be difficult to make out a capsule.

These tumors are very often multiple, and several cases have been reported in which the use of the limbs has been destroyed by them, complete amputation being necessary to relieve the patient of the weight.

Militia and Naval Medical Services and Ambulance

SYLLABUS OF COURSE IN MEDICAL TACTICS, MILITARY DISTRICT NO 2.

During the interval between autumn and spring training the Medical Officers of the Toronto Garrison and of the outlying parts of the District have for two years past held a short Tactical Course as part of their necessary training. The subjoined syllabus will serve to show the practical and useful nature of the work, which is unofficial and carried out as the work of the Branch, in this District, of the Association of Militia Medical Officers:

TACTICAL COURSE, 1911.

Place of Meeting—The Annex, Armouries.
Time—8.15 p.m.
Order of Dress—Mufti.
All medical officers in the command who can attend are requested to do so.

(Sgd.) J. A. GRANT, Lieut.-Col.,
P.M.O. Western Ontario Command.
J. T. FOTHERINGHAM, Lieut.-Col.,
P.M.O. Military District No. 2.

SYLLABUS.

I. Wednesday, January 25th, 1911.

1. Duties of Medical Officer in charge of a Regiment on active service or manoeuvres. Capt. P. G. Goldsmith, 2nd Regt., Q.O.R. of Canada.
2. Tactical Scheme No. 1.
General and Special Ideas.

II. Wednesday, February 1st, 1911.

1. Reconnaissance. Major A. C. Caldwell, R.C.E., Command Engineer, W.O.

2. Map Reading and Field Sketching. Major A. J. Van Nostrand, C. of G., D.I.O., M.D.2.

3. Completion of Tactical Scheme No. 1.

III. Wednesday, February 8th, 1911.

1. Notes on Field Ambulance Trek from Hamilton to Niagara-on-the-Lake, 1909-10. Lt.-Col. G. S. Rennie, O.C. No. XII. Field Amb.

2. Tactical Scheme No. 2.
General and Special Ideas.

IV. Wednesday, February 15th, 1911.

1. Report on proposed Manual of Interior Economy for a Field Ambulance, by the following committee: Lt.-Col. F. Fenton, O.C. No. X. Field Ambulance; Major D. W. McPherson, O.C. No. XI. Field Ambulance; Major J. A. Roberts, O.C. No. XIII. Cavalry Ambulance; Captain J. T. Clarke, P.A.M. Corps.

2. Completion of Tactical Scheme No. 2.

V. Wednesday, February 22nd, 1911.

Dinner at Canadian Military Institute.

J. T. F.

THE ASSOCIATION OF MILITIA MEDICAL OFFICERS

The annual meeting of this active and useful Association was held in Ottawa, as in previous years, during the week known in the service as "Military Week," on February 23rd and 24th. The similar annual meetings of the other branches of the service, the Cavalry Association, the Artillery Association, the Engineers, the Service Corps, and the Corps of Guides, are held at the same time, as well as the annual Paardeberg dinner held by those who were present at that epoch-marking fight.

The officers for 1911-12 were elected as follows: Honorary President, Sir Frederick Borden, Minister of Militia; Honorary Vice-Presidents, Col. E. Fiset, D.S.O., Deputy Minister of Militia, and Col. G. C. Jones, D.G.M.S.; President, Major E. A. LeBel, Quebec; Vice-Presidents (one for each military district), Major D. B. Bentley, Lt.-Col. Fotheringham, Major A. R. B

Williamson, Major J. W. Shillington, Major E. R. Brown, 5th R.H.; Lt.-Col. R. T. MacDonald; Capt. W. L. M. Carter, 8th R.R.; Major T. D. Walker, Major J. Ross, Major W. Webster, Major F. C. McTavish, Major D. McLauchlan, Captain L. S. Mackid; Secretary, Captain T. H. Leggett, Ottawa; Assistant Secretary, Lieut. N. MacLeod, Ottawa; Treasurer, Captain McKelvey Bell, Ottawa.

The Executive Committee is composed of one officer from each military district. They are: Lt.-Col. R. I. Lockhart, Lt.-Col. F. Fenton, Major F. Etherington, Major C. A. Hodgetts, Major C. F. Wylde, Major M. Lauterman, 6th Hussars; Major G. G. Turcot, Captain T. E. Bishop, Lt.-Col. J. A. Sponagle, Major W. L. Watt; Captain A. M. Robertson, 6th Regiment Artillery; Lt.-Col. S. R. Jenkins, 4th Regiment Artillery; Capt. J. A. Hislop, 19th Alberta Mounted Rifles.

The next meeting will be held February 27th and 28th, 1912.

J. T. F.

DEPARTMENT OF THE MEDICAL SERVICES

Few perhaps of the civil practitioners of Canada appreciate the importance of the organized Medical Departments of the Defence Forces of this country. The Army Medical Service, as distinguished from the unorganized and scattered assistance existing regimentally until 1900 has already acquired an *esprit de corps* and efficiency which is highly creditable to itself and useful to the country and the Empire. This has been secured quietly and without ostentation, without attracting much attention from either the public or the profession. Credit for the present forwardness of the corps is due to many causes, of which the three following may be specified:

1st. The fact that a medical man is in charge of the defence of the country in the person of the Hon. Sir F. W. Borden, K.C.M.G., M.D.

2nd. The fact that Colonel Eugene Fiset, D.S.O., the Deputy Minister of Militia, is also a medical man, and prior to assuming his present office was Director-General of the Medical Services, where, to his civilian knowledge, he added a thorough training in the administration of a military department. He had already

served in the militia here, and in South Africa with great distinction, bringing home a coveted decoration, that of the Distinguished Service Order.

3rd. The character of the *personnel* holding commissions in the Army Medical Service, from the present Director-General, Colonel G. Carleton Jones, down to the last-joined lieutenant,

Comparisons are odious, and none is implied in the statement which follows, but both in Great Britain and here our profession have "done themselves proud" by their public spirit and readiness to devote themselves unselfishly to the service of the country. In Great Britain, when the present Army Act revolutionized the system of defence, the first branch of the Territorial Service to be fully recruited and organized was the medical—and in efficiency and strength each year's report has shown them to be fully maintaining the lead then established over the combatant branches of the Territorial Forces.

In Canada it is the same. The gentlemen holding commissions in our regiments and in the Field Ambulances and General Hospitals of the Militia are men who hold the leading places in civil practice in all parts of the country, and, what is better still, they know that they have the good-will and sympathetic regard of their brother practitioners everywhere. A census of the mess-tables of the camps will show that medical men all over the country are to be found, not as medical only, but as combatant officers, in cavalry, artillery and infantry alike, in larger numbers than come, in proportion, from any other class in the community. This is only what one who knows the profession from the inside would expect.

J. T. F.

THE NAVAL SERVICE

The *Canada Gazette* of April 22, 1911, promulgates an Order-in-Council cancelling former regulations for the entry of medical officers and substituting the following:

Surgeons to be entered for a period of three years, which may be extended to five years.

Details of vacancies will be publicly advertised in the *Canada Gazette*, and candidates for entry will be required to forward

their application to the Secretary, Civil Service Commission, Ottawa, before the 1st October in each year, stating what diploma they hold, what practical experience they have had since qualifying, and also forwarding birth certificate, or sworn declaration of date of birth, and recommendations from persons of standing.

A proportion of the candidates will be selected, and will be required to undergo a competitive examination, in professional subjects, such examination being conducted under the auspices of the Civil Service Commission; the number of vacancies will determine the number of candidates accepted, appointments being made according to places taken at this examination.

Candidates must be British subjects, and must not be more than 30 years of age on the 1st October of the year of application; must be fully qualified medical practitioners and must be graduates of a Canadian Medical College, or be of Canadian birth, and must be able to show that they have had one year's practical experience since qualifying.

Successful candidates will be required to undergo a medical examination as to physical fitness for the service.

Surgeons will rank with lieutenants according to dates of commission.

Pay on entry, $4 per diem; after 3 years, $5 per diem.

Surgeons will, on entry, be granted an equipment allowance of $150 to assist in providing necessary uniform; the provision of full dress coat, full dress sword belt and ball dress coat will be optional, but it must be understood that officers will not be allowed to attend functions where these dresses are worn unless provided with the proper uniform.

Surgeons withdrawing at the end of three years' service, provided such service has been satisfactory, will be granted a gratuity of $1,000; after 5 years, $1,500; but to obtain this gratuity they will be required to join a Reserve of Medical Officers.

Officers joining the Reserve of Medical Officers will be liable to serve in the Naval Service in time of war or emergency; they will be required to bind themselves to remain in the Reserve for five years, receiving a retaining fee of $150 per annum; and, at the expiration of this period, may again bind themselves to remain a member for another five years, receiving a similar retaining fee.

Officers of the Reserve called upon to serve in time of war or emergency will receive pay at the rate of $5 per diem. If, during such re-employment, they are injured on duty, or lose their lives from causes attributable to the service, their cases will be dealt with as regards compensation for themselves, or pension and compassionate allowance for their widows and children, under the same regulations as those for officers of the same rank on the active list.

Officers will be permitted to wear the uniform of their rank whilst serving in the Reserve of Medical Officers.

RODOLPHE BOUDREAU,
Clerk of the Privy Council.

J. T. F.

TRAINING OF MEDICAL UNITS, 1910.

The subjoined paragraphs with reference to the Medical Services are welcome reading to every officer in them, and are worth publishing for the benefit of our *confréres* who are not in the service, who by the way are perhaps not aware how bald and unflattering an official report usually is.

The late Inspector-General, Sir Percy Lake, K.C.M.G., was accompanied in the inspections here referred to by General Sir John French, the Imperial Inspector-General, and his remarks in the Interim Report presented by the Militia Council to His Excellency the Governor-General and Commander-in-Chief of the Dominion, are as follows:

"MEDICAL SERVICES.

55. The Medical Services almost everywhere showed zeal and progress towards efficiency.

56. The system of attaching Cavalry Field Ambulances to Cavalry Brigades, and encouraging them to study mobility and their duties in relation to cavalry work is having good results. The system might well be extended.

57. The experiment of working a portion of the Medical Services at Niagara camp as a General Hospital proved satisfactory and afforded useful experience. Some excellent professional work was done here.

58. The training of the Field Ambulances was largely directed during the past summer to the part which they would more especially play in the field, namely, that of mobile medical units forming an integral part of the organized force to which they belong.

59. While mistakes were made, yet medical officers generally showed considerable aptitude for this branch of their work—in which they were usually far more at home than were the commanders of the forces, with which they were working, in knowledge of the proper manner in which to utilize them.

60. Sanitation generally, throughout the camps, was well attended to. Much progress has been made in this direction of late years by all except city corps, who are deficient in knowledge of this, as of other practical aspects of camp life.

61. There is still much room for improvement in most of the stretcher bearer organizations of corps. The money they cost might be spent with more advantage in other directions."

J. T. F.

Medicine

THE DEPRESSANT ACTION OF CAFFEINE WHEN COMBINED WITH ACETANILIDE

On account of the frequency with which caffeine is prescribed with acetanilide, presumably to overcome the depressing action of the latter, a recent bulletin, issued by the Public Health and Marine Hospital Service of the United States, should be of great interest to the profession.

Dr. Worth Hale shows by a long series of experiments upon the toxicity of acetanilide that its deleterious effects upon the heart are very imperfectly antagonized by caffeine. As far as the contractile power of the heart is concerned, the antagonism is very weak, or even not present at all, and in some cases the two drugs seem to combine to depress the heart to a greater degree than acetanilide does when given alone. The heart rate, on the other hand, is not slowed after a mixture of acetanilide and caffeine is given, as is the case when acetanilide is given alone, and the decreased heart rate following the exhibition of the former alone tends to become normal upon the subsequent injection of caffeine. Caffeine is further shown to increase the toxicity of acetanilide mixtures when given previous to the acetanilide, and in certain experiments this is not only a summation effect, but even some synergistic action is to be observed.

Sodium bicarbonte, quite in contrast, appears to markedly lessen the poisonous effects of acetanilide upon the heart, which is shown to be less depressed than when alkali is not given. Acetanilide, when given alone, proved to be far more toxic than in mixtures with the alkalies.

The combinations of the alkaloids of the morphine group (morphine, codeine, etc.) also increase the toxic effects of acetanilide, while mixtures containing salicylic acid and the bromides seem not to alter its poisonous effects in any way.

These experiments indicate, therefore, that caffeine increases the danger of acetanilide mixtures, as do also the opium alkaloids. On the other hand, in his experiments upon the lower animals, sodium bicarbonate appeared to be a fairly good antagonist, and would possibly be of use in acetanilide poisoning in man.

He shows also that caffeine is not materially antagonistic to the circulatory depression following antipyrine, but that it prevents the slowing in the heart rate. In the experiments, the mixtures of the above drugs were invariably more poisonous than antipyrine alone. In contrast, and as in the acetanilide experiments, sodium bicarbonate was somewhat antagonistic to the heart effect of antipyrine, but when given to the intact animal it did not seem to lessen the toxicity of the antipyrine in any degree.

If this experimental work is confirmed we must revise our belief that by the addition of caffeine we can render these coal tar products less depressant and more safe. We must consider that the addition of caffeine to acetanilide renders it more dangerous, and that soda bicarbonate is to be used if we fear the effect on the heart. J. H. E.

A NEW METHOD OF PREPARATION OF SPUTUM FOR EXAMINATION FOR TUBERCLE BACILLI

When tubercle bacilli are present in sputum in scanty numbers it is often difficult to demonstrate them. The method which Uhlenhuth recommends has been demonstrated to be of great value under such conditions. He adds to the sputum a preparation called antiformin, which is composed of equal parts of lavelle water and a 15 per cent. aqueous solution of caustic soda. On standing for an hour this dissolves mucus, and destroys all secondary organisms. The tubercle bacilli are protected by their waxy envelope and are resistant. The mixture is centrifuged, and the sediment examined in the usual way, a small amount of the original sputum being used to aid in fixing to the slide.

By this method it is frequently possible to prepare one slide

on which will be found all the acid-fast bacilli in a day's collection of sputum. Brown, in *The Journal of Medical Research*, records his use of this method in making cultures of tubercle bacilli from sputum. The secondary organisms being destroyed, he has been able, by washing the sediment three times in distilled water, to grow the bacilli readily on egg medium, transferring later to other media. He has found it difficult to grow the bacilli direct upon serum or glycerine agar.

J. H. E.

ALBUMIN IN THE EXPECTORATION OF THE TUBERCULOUS

Roulet (*Revue Médicale de la Suisse Romande*, April 20, 1910) records his experience with the Roger and Levy test for albumin. In 118 tuberculous cases examined, the test was negative in only two cases, and these were early stage cases, in which no tubercle bacilli had been demonstrated. Roulet concludes that when the chemical analysis shows the absence of albumin in the sputum, tuberculosis can be excluded. At the same time, he points out that the albumin reaction is present in many acute pulmonary diseases. Trona (*Gazz. degli Osped.*, No. 81, July, 1910) also declares that Roger's results are reliable. All known tuberculous cases give a positive result, whilst in ordinary chronic and acute bronchitis no albumin is present. Where there is cardiac or renal disease, the test is not reliable. The technique is simple: 5 c.cm. of the sputa are diluted with 15 to 20 c.cm. of normal salt solution, well shaken, and to this added 5 minims of acetic acid to precipitate the mucin. Shake, filter, and test filtrate for albumin either by heat or the trichloracetic test.

J. H. E.

Eye, Ear and Nose

THE CHANNELS OF THE PROPAGATION OF INFECTION FROM THE MIDDLE EAR INTO THE INTERIOR OF THE CRANIUM

Dr. J. Mouret, Montpelier, (*Journal of Laryngology* report, section of Otology, International Congress, Budapest, 1909), in introducing this subject, is reported as follows:

The middle ear, through its pneumatic annexes (the mastoid and intrapetrous cells), may extend into nearly the whole of the temporal bone, isolating the superficial osseous shell, as well as from the petrous pyramid. This disposition of the pneumatic apparatus accounts for the extension, sometimes so rapid, of the infection from the tympanic cavity to the most distant parts of the mastoid and of the petrous bone. Suppuration of the middle ear may penetrate into the cranium either by passing through the walls of the tympanum or of its pneumatic annexes.

Channels from the middle ear:

(1) Bony dehiscences.

(2) Lesions of the internal table of the bone.

(3) Anatomical apertures for arteries, veins, or nerves which communicate between the middle ear and the cranial cavity.

(4) The route through a vein or sinus.

(5) Ready-formed channels, the aqueduct of Fallopius, or the petro-mastoid canal. Perforation of the bone and venous infection are the two most common means by which suppuration of the middle ear passes into the interior of the cranium. Perforations are situated, by preference, where the internal table of the bone offers least resistance, either under normal conditions, the roof of the tympanum or of the tympanum and the antrum, or the floor of the tympanum; or else by the formation of large cells, where the pus easily stagnates on account of their size and of their dependent position (persinusal wall, posterior wall of the petrous bone).

The Channel Through the Internal Ear.—The infection may reach the internal ear, in the first place, and pass from there into the cranial cavity:

(1) By dehiscences (rare).

(2) Through lesions of the osseous capsule of the labyrinth.

(3) Through the anatomical apertures for the passage of the auditory nerve and of the arteries and veins of the internal ear.

(4) By the intro-venous route.

(5) By pre-existing channels, viz., the aqueduct of the vestibule and that of the cochlea.

(6) By routes improperly called lymphatic (the lymph vessel of the aqueduct of the cochlea, small channels passing from the saccus endolymphaticus, the peri-vascular sheaths of the internal auditory artery.)

The advances of the infection into the interior of the cranium may take place:

(1) Directly, by continuity of the lesions from organ to organ.

(2) By intravenous propagation (thrombosis, or pathogenic germs carried by the blood).

(3) By diffusion of infective germs into the spaces of the cranial cavity.

Propagation of the otitic infection into the interior of the cranium by lymphatic channels does not exist.

P. G. G.

ON THE INDICATIONS FOR OPERATIVE TREATMENT OF SECONDARY SUPPURATIVE LABYRINTHITIS

Schmiegelow (*Jour. Laryngology*, Aug., 1910) writes his experiences of forty-two cases of labyrinthitis following purulent disease of the middle ear. These cases are probably not so rare as one might think, judging from the recent literature on cases of inflammation of the labyrinths, not suppurations or even suppurative, are not diagnosed. There also appears to be an excess of zeal being used to cope with the labyrinthine inflammation,

forgetful of the fact that the procedure is one not without considerable danger, and one in probably the majority of cases quite unnecessary, provided a thorough radical operation of the mastoid is performed. Schmiegelow cured ten of his cases by operation on the cavity of the middle ear alone, and he does not depend solely on functional tests as a guide for operation, but also on the advance of the disease and on the direct examination of the labyrinth wall after the radical operation. He says the treatment of secondary labyrinthitis consists sometimes in a thorough prophylaxis and sometimes in an operative opening of the labyrinth cavities.

In twenty-two of thirty cases of diffuse purulent labyrinthitis the treatment consisted only of the radical operation on the middle ear. Of these twenty-two cases, two died of complications preceding the operation. Of the twenty remaining cases, two died, whilst thirteen, or sixty-five per cent., recurred. In ten cases the labyrinth was opened, twenty-seven cases a cure was obtained, but two died of complications dating from before the operation and one of meningitis seventeen days after the operation. P. G. G.

EXPERIMENTS ON THE PRACTICABILITY OF MENINGITIS TREATMENT (SPECIFIC AND SEPTIC) OF LAVAGE OF THE CEREBRO-SPINAL SUBARACHNOID SPACES—PRELIMINARY COMMUNICATION

Dr. J. Stoddard Barr, at the recent meeting of the B.M.A., described experiments which showed the practicability of lavage of the subarachnoid spaces (*Jour. Laryngology*). When one considers how helpless we are in cases of diffuse meningitis, he will welcome any method, however heroic it may be, that appears in any way to offer additional hope to save a patient's life. Barker and Jakins have published cases which show that repeated lumbar puncture is of real value in purulent meningitis. In this manner the pus simply flows out of the opening made for it, while in Barr's method he washes the pus from above.

The experiments were performed in the summer of 1909, and

conducted in the following way: The body of a child was placed on its right side upon a table, and the head was supported by means of a wooden block. Lumbar puncture was performed, and the hollow needle left *in situ*. A small quantity of turbid fluid escaped, but soon ceased to flow. Through a trephine opening in the skull, made above and behind the left ear, a canula-trocar was introduced into the lateral ventricle. By means of a rubber tube attachment and a glass funnel held two inches above the head, water treated with carbol-fuchsin was allowed to flow into the ventricle. In less than a minute the fluid escaping from the lumbar puncture was found to be tinted red; it continued to flow as long as the fluid entered the lateral ventricle.

On examining the brain afterwards the course of the fluid could be traced easily into the fourth ventricle via the foramen of Monro, third ventricle, and iter. From the fourth ventricle the fluid found exit into the subarachnoid space, through the foramen of Magendie, and possibly also through the two lateral apertures.

It stained the entire cerebello-medullary cistern, passed forward into the inter-peduncular cistern, upwards along the Sylvian fissures over the anterior ends of the temporo-sphenoidal lobes, and even along the vaginal sheaths of the optic nerves.

Whilst arranging for experiments on monkeys, a suitable case came under Dr. Barr's care. The patient was a boy aged fifteen, with advanced purulent lepto-meningitis, secondary to chronic purulent ear infection (left). The symptoms were typical of the worst form of the disease, and lumbar puncture verified the diagnosis, the fluid withdrawn being turbid and containing streptococci and pus cells.

The radical mastoid operation, administration of urotropine, repeated lumbar punctures, and injections of anti-streptococcic serum led to no improvement in the condition, and the boy became moribund. Under chloroform anesthetic, lumbar puncture was performed. A half-inch trephine opening was made in the cranium above and behind the left ear, and a wide canula trocar was passed into the left lateral ventricle. There was immediately a gush of semi-turbid fluid in large amount, and under great pressure. The pulse at once steadied from 130 to 100 per

minute, and respirations became regular and ceased to exhibit the Cheyne Stokes type as before.

After the flow had ceased a rubber tube was passed through the canula into the ventricle and the canula removed. Sterilized saline solution at 100° F., was allowed to flow into the lateral ventricle, the glass funnel being held at first two inches above level of the head. In a few minutes turbid fluid began to drop from the lumbar canula. The funnel was raised up to a foot above the head, when a constant stream of tinted fluid, mixed with flakes of exudate, escaped from the canula. Lavage was continued for an hour, and finally 10 c.c. of anti-streptococcic serum was introduced into the lateral ventricle. The patient bore the operation well. It was noticed that the respirations increased in rapidity when the funnel was raised over a foot above the head. Death ensued fourteen hours afterwards, and the diagnosis was confirmed by post-mortem examination.

The experiments had at least proved that lavage of the subarachnoid spaces could be carried out on a living person, with apparently no unusual danger to life.

P. G. G.

AURAL TUBERCULOSIS IN CHILDREN

Dr. Wm. Milligan (*Jour. Laryngology,* Oct., 1910) publishes a splendid article on this subject. The paper was read at the London meeting of the B.M.J., and will long remain a classic on the subject. He believes the disease is of much more frequent occurrence than we have so far been taught. The difficulties in diagnosis are very great. These are enhanced by the fact that the stage of pure tuberculosis infection is often a short one, while the mixed infection which is superadded changes the character so that it is almost indistinguishable from the ordinary otitis media purulenta.

Frequency.—The vast majority occur in infancy and children. The poor are most liable, and this, Milligan says, is due to the different methods of feeding, or in want of attention to the pasteurization of the milk supply, or is due to aerial infection contracted in ill-ventilated dwellings and rooms. Twenty

per cent. of hospital children under six years of age suffering from chronic otitis media have for the underlying cause the tubercle bacillus. The frequency of the disease tends to diminish after the fourth year. When due to blood infection, it usually begins in the cancellous tissue of the petro-mastoid, while, when by inhalation or ingestion of tuberculous material, the mucosa of the middle ear clefts is first affected. The latter area is considered the most commonly diseased. Attention is drawn to the fact that the infested bacillus is not, *per se*, a pyogenic organism, and when the discharge is definitely purulent, other organisms must be held responsible. The characters of a non-infected tubercular discharge are described as follows: "It is a thin, watery, and for the most part of an odorless character, containing white or grey granules or flakes. Lymphocrypts are abundant, while leucocrypts are comparatively few, and possess pale and fragmented nuclei. Giant cells are usually found in the tuberculous area. Difficulty may arise in identifying the tubercle bacillus. Old epithelial squams are acid fast, and their fragments may be mistaken for the tubercle bacillus.

There are two clinical types, the acute and chronic. In the former, tubercles are numerous and break down early, while in the latter, which is the most common, there is greater liability to caseo-necrosis, leading in time to exposure of the dura, facial nerve or contents of the internal ear.

All tuberculous middle ear lesions are accompanied by extensive destruction of the tympanic mucous membrane, infection of the ossicular chains and subsequent exfoliation. This latter feature is especially prominent in the disease.

Wellington found Bezold's mastoiditis rare in these cases, as opposed to Gruniner's series, in which it occurs in 20 per cent. Early enlargement of peri-auricular glands is peculiarly common in tubercular otitis media, and is not only characteristic, but often the earliest symptoms. Those attacked are in order, the mastoid glands, deep glands in the posterior triangle, the parotid and retropharyngeal. When a tuberculous brain abscess is found complicating tuberculous otitis media, it is almost invariably of pyogenic origin.

Channels of Infection.—The avenues along which tubercle bacilli travel to effect an entrance into the middle ear cleft are:

(1) Aerial.—Air passing up the Eustachian tube and depositing bacilli upon its lining membrane—respiratory tuberculosis.

(2) Lymphatic.—Along various lymph-channels leading from adjacent foci.

(3) Vascular.—Along blood vessels following the entrance of bacilli from the respiratory or digestive canals.

(4) Through the lymphoid and along the sub-epithelial collections of lymphoid tissue, which exist in such abundance in the pharynx and naso-pharynx, and also around the lumen of the Eustachian tube, bacilli being carried inwards by means of leucocytes, and often without any demonstration lesion of the epithelium-aero-lymphogenous.

(5) From the entrance of bacilli through a perforated membrana tympani.

(6) Through erosion of the dermic lining of the external auditory meatus.

The most common route of invasion is in adults, at any rate by way of the respiratory system. Milligan thinks that the importance of ingestion tuberculosis has not received due consideration in England. He thinks the lymphatic tissue of Waldeyer's ring is the most important portal of entry. In young children he has satisfied himself that "in the pharynx and naso-pharynx is found the inlet of the tubercle bacillus." His explanation of how the organism gets into the naso-pharynx is ingenious. This theory is that the bacillus is swallowed with the milk upon which the child is fed; that regurgitation of food, which is so common in young children, forces portions of the now semi-digested milk into the tonsillar crypts, the naso-pharyngeal cavity, and the neighborhood of the Eustachian tube. As a preventative measure against tuberculosis in general, Milligan strongly insists that our children should have milk which is either from tubercular tested cows, or pasteurized. General hygienic and sanitary measures must be more carefully seen to if we hope to make any marked progress in the prevention of consumption among the poor.

Symptoms.—There is no symptom, subjective or objective, which is pathognomonic of this disease. A case in which the onset is painless, without inflammatory reaction, associated with one

or more perforations, with early enlargement of the peri-auricular glands and facial paralysis, forms the clinical picture of tubercular otitis media. Frequently the inner exposed wall of the tympanum is found covered with edematous granulation tissues, showing microscopically active tuberculous changes. When this tissue is seen and the underlying bone found to be carious, Milligan strongly suspects tuberculosis. Glandular enlargement may be the first symptom noticed. Facial paralysis is not only frequent, but 65 per cent. of the author's T.B. cases had facial paralysis. He quotes Grimmer again in speaking of facial paralysis as being almost pathognomonic. In infants and young children slight paresis may pass almost unnoticed. Involvement of the labyrinth is slow, while complete nerve deafness is ultimately common.

The discharge.—This is as a rule copious, thin, sanious, but partly from breaking down and secondary infection, it is extremely fetid. When the latter occurs, it is thick, muco-purulent and curdy. Sometimes a gritty sensation is felt in the discharge, due to the presence of spicules of bone.

Diagnosis.—This is often very difficult. It is necessary to find the bacillus in the discharge, the granulation tissue, or necrotic bone. Animal inoculation may be a great help. The difficulty in finding the bacillus is due to the presence of other acid fast bacilli, from which it is hard to distinguish, and also to the fact that the bacillus of tuberculosis is readily destroyed by the presence of other putrefactive organisms. Examination of tufts of tissue offers a better chance for finding the T.B. Animal inoculation is the best method.

Prognosis.—This must be guarded. The younger the patient the graver the prognosis. The general condition, mode of life, and family history are important. Early glandular enlargement and facial paralysis are bad signs.

Treatment.—Usually this is begun too late. Free drainage is of great importance in acute cases; this, with judicious use of tuberculin, may bring about a cure. Operative treatment should be thorough, even to sacrificing the sense organ; the greater the amount of temporal bone removed the better the prognosis, irrespective of dura, nerve or artery.

If the glands are not broken down they are for a time left

alone. Removal of adenoids and tonsils is a preliminary step of great importance. Local treatment by drops, etc., has not so far effected a cure. Milligan speaks strongly of the necessity for early recognition of the disease among school children. He says: "I hold that it is a matter of national importance to have trained aurists attached to all Board of Education schools, whose energies should be devoted to endeavoring to save the hearing power of the youth of the country, who should be provided with an up-to-date laboratory and the means of carrying out investigations upon a scientific basis, and who should be adequately remunerated at the public expense for their services. The number of blighted lives and of lost hopes from loss of or seriously impaired audition is appalling; the more so, when we, as otologists, know that much of this sad state of affairs is brought about largely from ignoranee and from neglect in following orthodox methods of treatment.

His belief is:

(1) That aural tuberculosis in childhood is of far more frequent occurrence than is usually supposed.

(2) That an early and accurate diagnosis of the underlying factor in the production of suppurative otitis media is essential from a therapeutic, prognostic and sociological point of view.

(3) That children suffering from tubereulous otitis media should be segregated, and every endeavor made to raise their powers of resistance.

(4) That local authorities should be apprised of the great danger to life from an impure milk supply, and that means should be adopted to secure efficient supervision of dairy farms and creameries.

(5) That notification of tuberculosis, in whatever form it occurs, should be made compulsory.

P. G. G.

Canadian Journal of Medicine and Surgery

Editor:

J. J. Cassidy, M.D.

45 Bloor St. E., Toronto

Managing Editor:

W. A. Young, M.D., L.R.C.P., Lond.

145 College St., Toronto

Surgery:

N. A. Powell, M.D., C.M., Professor of Medical Jurisprudence, Toronto University; Senior Assistant in charge, Emergency Department, Toronto General Hospital; J. F. W. Ross, M.D., Professor of Gynecology, University of Toronto; Gynecologist, Toronto General Hospital.

Clinical Surgery:

Alex. Primrose, M.B., C.M., Edinburgh University; Associate Professor of Clinical Surgery, Toronto University; Secretary Medical Faculty, Toronto University; Surgeon Toronto General Hospital; and Herbert A. Bruce, M.D., F.R.C.S., Eng., Surgeon, Toronto General Hospital.

Orthopædic Surgery:

B. E. McKenzie, B.A., M.D., Toronto; Surgeon to the Toronto Orthopedic Hospital; ex-President of the American Orthopedic Association; and H. P. H. Galloway, M.D., Orthopedic Surgeon, Winnipeg General Hospital; Lecturer in Orthopedic Surgery, Manitoba Medical College; Member of The Medical Orthopedic Association.

Militia and Naval Medical Services and Ambulance:

J. T. Fotheringham, M.D., Lieutenant-Colonel, Army Medical Corps, Associate Professor of Medicine and Clinical Medicine, University of Toronto; Associate Collaborator Chas. J. Copp, M.D., C.M., Hon. Sec. Provincial Council of Ontario, St. John Ambulance Association.

Medical Jurisprudence and Toxicology:

Arthur Jukes Johnson, M.B., M.R.C.S., Eng., Coroner for the City of Toronto; Surgeon Toronto Railway Co., Toronto; W. A. Young, M.D., L.R.C.P., Lond., Ex-President of the American Medical Editors' Association; Associate Coroner, City of Toronto.

Physiotherapy:

Chas. R. Dickson, M.D., C.M., Queen's University; M.D., University of the City of New York; Electrologist Toronto General Hospital, Hospital for Sick Children and St. Michael's Hospital.

Pharmacology and Therapeutics:

A. J. Harrington, M.D., M.R.C.S., Eng., Toronto.

Pediatrics:

Allen Baines, M.D., Toronto; Associate Professor Pediatrics, University of Toronto; Physician, Hospital for Sick Children; A. R. Gordon, M.D., Toronto; Senior Medical Assistant, Toronto General Hospital; Helen MacMurchy, M.D., Toronto.

Medicine:

J. J. Cassidy, M.D., Toronto, ex-Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; W. J. Wilson, M.D., Toronto, Physician, Toronto Western Hospital; and Dr. J. H. Elliott, ex-Medical Superintendent, Gravenhurst Sanatorium, Ont.; Associate Medicine and Clinical Medicine, University of Toronto; Senior Medical Assistant, St. Michael's Hospital.

Clinical Medicine:

Alexander McPhedran, M.D., Professor of Medicine and Clinical Medicine, Toronto University; Physician, Toronto General Hospital; Lewellys F. Barker, M.D., Professor of Medicine, Johns Hopkins University, Baltimore, Md. H. B. Anderson, M.D., Toronto; Associate Professor of Clinical Medicine, University of Toronto; Physician, St. Michael's Hospital.

Bacteriology:

J. G. Fitzgerald, M.D., Lecturer in Bacteriology, University of Toronto.

Mental and Nervous Diseases:

N. H. Beemer, M.D., Mimico Insane Asylum. Campbell Meyers, M.D., M.R.C.S., L.R.C.P. (London, Eng.), Private Hospital, Deer Park, Toronto.

Gynecology and Obstetrics:

Geo. T. McKeough, M.D., M.R.C.S., Eng., Chatham, Ont.; and C. F. Moore, M.D., Toronto.

Pathology:

W. H. Pepler, M.D., C.M., Surgeon Canadian Pacific R.R., Toronto; Junior Medical Assistant, St. Michael's Hospital; and J. J. Mackenzie, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology:

J. M. MacCallum, M.D., Toronto, Senior Assistant Eye Department, Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Nose, Throat and Ear:

Percy G. Goldsmith, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb; Senior Assistant Ear, Nose and Throat Department, Toronto General Hospital.

Dermatology:

D. King Smith, M.B., Tor., Toronto; Demonstrator in Pathology, Toronto General Hospital.

Address all Communications, Correspondence, Books, Matter regarding Advertising, and make all Cheques, Drafts and Post-Office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

Reprints supplied Authors at Cost.

Editorials

EDUCATION IN REGARD TO CONSUMPTION

It is quite true, that instruction given to school children in relation to certain agencies operative in producing tuberculosis—defective ventilation and uncontrolled tubercular infection in private and public buildings—is of immense utility. But, even if such instruction were regularly given by the most competent teachers, and appreciated by intelligent pupils, we do not think that tuberculosis would become a controllable disease. Neither can we accept a statement, made recently in a report by an Ontario official, that, if precautions were taken to remove tubercular infection from infected homes, "tuberculosis would be gradually but certainly exterminated from Ontario." In the first place, admitting for argument's sake, that his premises are sound, there are strong reasons for thinking that the instructions would be vain and the preventive measures neglected. A disease of frightful aspect, and of considerable fatality, is treated with indifference in Ontario, and is constantly breaking out here, although school children are taught that it can be prevented by vaccination. So much for instruction in helping to protect an indifferent public from a preventable disease.

Tuberculosis is to-day the most frequent cause of death in Ontario, no other single disease approaching

it in death-dealing power. That the vital statistics of Ontario show improvements on the mortality rates from tuberculosis is true. The rate has fallen from 11 per cent. in 1901 to 7.69 in 1908.

Instruction in the means of preventing tuberculosis has not been lacking in the public schools of Ontario. Twenty-five years ago a Manual of Hygiene, prepared by certain members of the Provincial Board of Health of Ontario, was issued to schools and colleges. It was intended by the Education Department that the sanitary teachings of the Manual would be conveyed orally to the children by their teachers. Now, at page 127 of that book, the following statements may be read: "Hence an additional reason is presented for free ventilation of the rooms inhabited by consumptives. Care should also be exercised by persons associating with those affected with this disease, and the expectorations should be disinfected and destroyed." Perhaps some of the Ontario school teachers who have trained children during the past twenty-five years may have found that the new doctrines of Koch did not fit in with the views current among the people as to the origin of tuberculosis. If they were incredulous in this matter, they sinned in good company, for, to our own knowledge, twenty-two years ago many physicians in Ontario looked on Koch's doctrines about tuberculosis as incredible. But, in spite of doubts and disbelief on the part of the school teachers and the doctors, Koch's doctrines were thrown broadcast and have been growing with the growth of the present generation.

And yet, to what good purpose? An obstinate doubt intruded twenty-two years ago, and it will not down now. The bacillus tuberculosis stands for much; but it is, by no means, the only source of tuberculosis. Hear what Monro says in his Manual of Medicine, published at the beginning of the present year: "Of late years, it has been fashionable to minimize the importance of inherited predisposition, and cases that seem to exemplify it have been explained on the hypothesis of a very long incubation period extending possibly over years. Such a theory, however, is not sufficient to account for the facts. No doubt the predisposition in the case of phthisis is partly attributable to the form of the chest; but, even in the case of scrofula, there is an extraordinary tendency on the part of some families to suffer. Similar facts are well known in connection with the exanthems. *The seed is essential; but the soil is scarcely less important.*" A very saddening admission; but one which writers who undertake to instruct the public as to the origin of tuberculosis should ponder over. It would be a fine thing, indeed, if medicine could proclaim, that tuberculosis can be exterminated by education in regard to consumption, as surely as smallpox can be conquered by vaccination. But it would not be a whole truth, and, in matters which intimately concern happiness and life, it is not wise to proffer half truths to the people.

J. J. C.

ANIMAL TUBERCULOSIS AND PUBLIC HEALTH

In the Report of the International Commission on the Control of Bovine Tuberculosis, 1910, issued by the Department of Agriculture, Canada, attention is drawn, among other matters, to the influence of animal tuberculosis on public health. The members of that Commission declare "Their recognition of the fact that tuberculosis among animals is also an important public health problem. Considered as such, the eradication of tuberculosis among animals should have the approval and support of all those persons who are interested in curtailing human suffering and prolonging human life."

As our readers are aware, a great controversy was started ten years ago, after Koch had stated that human tuberculosis is not transmissible to cattle, and that bovine tuberculosis is rarely or never communicated to man, and that, therefore, there is no danger to man from the milk or flesh of tuberculous cattle.

On the other hand, von Behring asserted in 1903 that tuberculosis in man (including the phthisis of adult life) is due to bacilli of the bovine type, which have entered the body chiefly by ingestion, and which may have long remained latent. He also says that the milk with which infants are fed is the chief cause of consumption. It is not necessary to accept von Behring's view that adult phthisis is always due to an infection in early life. However, according to Still's observations, 29 per cent. of the cases of

tuberculosis in childhood are due to alimentary infection.

Recent researches by Calmette and others furnish good grounds for believing that a large proportion of cases of pulmonary tuberculosis are due to bacilli which have penetrated the intestinal mucosa, passed on in the chyle through the mesenteric glands into the thoracic duct, and thus travelled into the veins, the right side of the heart and the pulmonary capillaries.

Contaminated milk would, therefore, seem to be an important means of infection, and it has been found that both the milk and feces of tuberculous cows, *even though the udder is not diseased,* may contain large numbers of living and virulent tubercle bacilli. Danger from milk, we know, can be entirely averted by boiling the milk. The muscle of animals used as food is rarely tuberculous, and even if it should be eaten, the danger is averted by thorough cooking.

While considerations, such as those which engage the attention of the International Commission on the Control of Bovine Tuberculosis, are interesting to cattle raisers and cattle exporters, they are not of great importance to consumers. Bovine tuberculosis is conveyed to man chiefly by the milk of tuberculous cows, and, to prevent that sort of infection, the milk used by young and old should be boiled.

J. J. C.

MORTALITY FROM PUERPERAL SEPTICEMIA IN ONTARIO

A STUDY of the mortality rates of puerperal septicemia in Ontario is rather perplexing. Thus, in 1897, the rate was 3.9 per thousand; in 1898 it was 1.54; in 1899 it was 1.5; in 1900 it was 1.88; in 1901 it was 1.75; in 1902 it was .89; in 1903 it was .9; in 1904 it was .77; in 1905 it was .52; in 1906 it was 1.02; in 1907 it was .89; while in 1908 it was 1.71. For comparison, we give some British statistics: In 1908 the deaths in England and Wales from puerperal fever numbered 1,395, a mortality of 1.4 per thousand. In Scotland the returns for the same period show a mortality of 1.7, and in Ireland 1.8 per thousand. These British vital statistics were recently severely commented on in the British medical press. If the Ontario statistics for 1902, 1903, 1904, 1905, and 1907 are favorable to obstetric art, then the statistics of Ontario for 1908, which resemble the British statistics of that year, must be looked on as unfavorable to it. The Ontario mortality rate for puerperal septicemia for 1908 does not show, that the high-water mark of obstetric art has been generally reached in this Province. To estimate the influence of obstetric art on puerperal septicemia, the Registrar-General should show the number of births, in a year, with physicians in attendance; the number of births, with no physician in attendance; the number of births, with midwives in attendance, and the percentage of deaths from puerperal septicemia in each of these classes.

Great risks call for severe measures of prevention. The risks to life from childbed are great. Hence the preventive measures adopted in lying-in hospitals are so devised as to dominate these risks. What is possible in a lying-in hospital cannot be found in ordinary dwellings, and yet most women in Ontario give birth to children in ordinary, or even in poor, dwellings. Nobody would think of undertaking a surgical operation amidst surroundings in which many women are confined, and yet, in the latter, the wound surface and potential area of infection are much greater than in many surgical procedures. It is not possible for every parturient woman to have the advantages of institutional treatment; but she should receive the benefits which ordinary medical knowledge confers.

There are many matters relating to the prevention of puerperal sepsis which are deserving of consideration, but it will simplify the question to present only the more important heads. It is now pretty generally agreed that the adoption of the following axioms would materially diminish the risks of maternal sepsis:

1. The general employment of abdominal diagnosis and the strict limitation of vaginal examinations.

2. The use of rubber gloves for all vaginal and uterine examinations and manipulations.

3. The thorough cleansing of the vulva and adjacent parts immediately prior to labor.

4. The proper use and not the abuse of the forceps.

In reference to the first point, the following rule is laid down in the Rotunda Practical Midwifery: "In nearly all cases in private we dispense with vaginal examinations and find out if the patient is in labor, the lie of the child and the progress of labor by abdominal palpation. With practice it is quite easy to do this in the great majority of cases. We strongly recommend the conduction of normal labor without vaginal examinations." While the advantages of abdominal diagnosis are obvious, it is but little employed by obstetricians. The reason of this partly lies with the medical schools. Medical students who are not trained to perfect themselves in the abdominal method of diagnosis do not adopt it in their practice, or, if they do adopt it, do not progress beyond a moderate degree of excellence.

Rubber gloves are successfully employed in the delicate operations of general surgery, and with experience they can also be employed by the obstetrician. Many obstetricians use them. Should a case of maternal septicemia occur, in spite of the use of rubber gloves, it is a source of consolation to the obstetrician to feel that he has taken this precaution and that the origin of the maternal infection must be sought for elsewhere.

Even if the vaginal examination is omitted, the cleansing of the external genitals before the birth of the child should be carefully done. It is not necessary that irritants, such as alcoholics, should be used;

but a preliminary cleansing of the labia minora, thighs and lower abdomen with soap and water, followed by the application of an antiseptic solution, such as mercuric chloride (1 to 2,000), should always be done. The soaking and sponging of the labia minora with an antiseptic is the best way to sterilize these parts, which cannot be scrubbed.

In reference to the midwifery forceps, the authors of the Rotunda Practical Midwifery say: "To know when to apply the forceps is most important. We think that when difficulty is met in applying, the propriety of the application is open to question." To call for the forceps, some danger on the part of the child, or danger on the part of the mother, should be present. It seems incredible that the forceps should be applied without sterilization and with lard as a lubricant; but some obstetricians are careless in these matters. The rule should be that, as a preliminary to the application of the forceps, the external genitals of the patient should be cleansed, the hands of the obstetrician cleansed and rubber gloves put on, the bladder emptied, the vagina douched, and a final vaginal examination made, to make sure that the membranes are ruptured, the os fully dilated or dilatable, and the head of the child fixed by its largest diameter in the brim.

It is to be hoped that the statistics of puerperal septicemia in Ontario for 1909 will show an improvement over the statistics of 1908.

J. J. C.

THE WELLESLEY PRIVATE HOSPITAL

We are to have in the city of Toronto a large, modern private hospital. The property of Mr. Frederic Nicholls, known as "The Homewood," which formerly belonged to Mr. Homer-Dixon, has been acquired by some of the medical men of this city, backed up by a number of prominent citizens.

The need of such an institution in this city is recognized by all. With the exception of a few small private hospitals, the only provision which has been heretofore made for private patients is that found in the private wards of the general hospitals, and even this has been quite inadequate. Many people, who are able to pay for their accommodation, have an objection to entering a public institution. With the increase in wealth and population in our city, such an institution as The Wellesley Private Hospital should be a decided boon.

We understand that The Wellesley will have an operating suite of the most modern character, and the equipment throughout will be the best that can be obtained.

A new wing is to be added, with accommodation for about sixty patients, many of the rooms having private bathrooms.

The property consists of about three acres of land, and is exceptionally well suited for the purpose intended. It is practically in the centre of the city, and, although conveniently near to the Belt Line car on Sherbourne Street, yet it is sufficiently far away

to prevent the noise of the street cars being objectionable.

We are glad to hear that our old friend, Dr. J. N. E. Brown, who has done such excellent work during the last six years at Toronto General Hospital, is to be in charge of The Wellesley, and, in addition, there will be two resident house surgeons.

There will be no medical staff; but any physician of good standing and recognized surgeons will be allowed to attend their own patients.

We understand that something in the neighborhood of $150,000 will be expended in the new building and equipment.

In this connection the question arises as to the propriety of providing accommodation for private patients in the large public hospitals. To begin with, one naturally asks what is the custom elsewhere? In London there is practically no accommodation for private patients in any of the large general hospitals. The same is true of many of the hospitals throughout England, as well as of those in Scotland and Ireland. This is also the case in most of the large hospitals on the Continent, and it is similarly true of many in the United States. The Massachusetts General Hospital, of Boston, has no provision for private patients whatever. In most of the large hospitals in New York the same condition exists.

In the new General Hospital a pavilion is being provided to accommodate from one hundred to one hundred and fifty private patients. As Toronto General Hospital has received a grant from the city of

Toronto of $400,000 to assist in providing accommodation for the city's poor, and another $600,000 from the Ontario Government with the additional object of providing facilities for the teaching of students, it is a question whether the trustees of this hospital are justified in expending any portion of this money for the erection and equipment of a wing for the accommodation of the wealthy people of this city. We are personally opposed to private patients being taken care of in any institution built out of public funds.

In view of the many persons who are accustomed to luxurious surroundings at home, and the great difficulty of amicably installing trained nurses (owing to the servant problem) in the home, we feel that The Wellesley Private Hospital will indeed be a boon gratefully accepted by those requiring either surgical skill or medical treatment. We wish The Wellesley every possible success and feel that it has an exceedingly bright future before it.

W. A. Y.

Obituary

DEATH OF DR. D. A. SINCLAIR

Dr. Daniel Archibald Sinclair, a medical practitioner widely known in Toronto and Western Ontario, died on May 9th at his residence, 315 Spadina Avenue. His death was quite unexpected. Dr. Sinclair had been ill but a week, and was thought to be recovering until two days before.

Dr. Sinclair was born in Lochgilphead, Argyleshire, Scotland, on May 24, 1843. Educated in Elgin county, Ont., he taught school there, and in 1860 entered the Rolph School of Medicine, graduating with M.D. in 1864. Beginning practice at Nilestown, he afterwards moved to Wallacetown and Fingal, and thence to Melbourne, West Middlesex.

In 1870 Dr. Sinclair took post-graduate work at St. Thomas' Hospital, London, Eng., obtaining the degree of M.R.C.S. From England Dr. Sinclair returned to Melbourne, and in 1895 moved to Toronto. Dr. Sinclair practised continuously for forty-seven years.

Fraternally Dr Sinclair was a Mason, in religion a Presbyterian and in politics a Reformer.

Mrs. Sinclair died in 1901. A daughter and three sons survive.

Dr. Sinclair felt keenly the loss of his son, the late Dr. D. A. Sinclair, who died last October.

News of the Month

DR. C. K. CLARKE NOW MEDICAL SUPERINTENDENT OF TORONTO GENERAL HOSPITAL

Dr. Charles K. Clarke, Superintendent of the Hospital for the Insane on Queen Street West, Toronto, and Dean of the Faculty of Medicine in the University of Toronto, has been appointed the new Medical Superintendent of the Toronto General Hospital, to succeed Dr. J. N. E. Brown, who recently retired. Dr. Clarke assumed his new duties on May 15th.

Dr. Charles Clarke was born in the town of Elora, Ont., on February 16, 1857, the son of Honorable Chas. Clarke. He was educated at the Elora Grammar School and at the University of Toronto, from which he graduated as M.B. in 1878 and as M.D. in 1879. He entered the Ontario public service as clinical assistant to the late Dr. Joseph Workman of the Toronto Lunatic Asylum in January, 1874, and afterwards became assistant physician in that institution. In 1880 he was appointed Assistant Medical Superintendent of the Hamilton Asylum, then Assistant Superintendent of the Rockwood Asylum for the Insane at Kingston, and in 1885 became Superintendent of the latter institution. While holding this position Dr. Clarke was also Professor of Mental Diseases in Queen's University. In 1905 he was appointed Superintendent of the Hospital for the Insane on Queen St. West in this city, a position he has held ever since. He has taken a prominent part in the affairs of the University, serving as Dean of the Faculty of Medicine, and for many years he has been regarded as an authority on mental diseases, his opinion being frequently sought in such cases in court.

Following the appointment of Dr. Charles K. Clarke as Superintendent of the Toronto General Hospital at a salary of $5,000 per annum, several promotions have been made by the Provincial Government among the officials of the institutions of

the province. Dr. Clarke's resignation has been accepted. Hon. Mr. Hanna, Provincial Secretary, speaking with reference to Dr. Clarke and his work, stated that he was very sorry that Dr. Clarke was leaving the Government service, as he was one of the most efficient of Government officials. Dr. J. M. Forster, Medical Superintendent of the Hospital for the Insane at Brockville, has been transferred to Toronto to succeed Dr. Clarke. For more than 20 years Dr. Forster has been in the asylum service of Ontario. He is a graduate of Toronto University, 1886, and is a man of progressive ideas, being both forceful and energetic. He is intensely in sympathy with all the newer methods of hospital care for the insane and spent some time in Europe in special work studying the modern phases of psychiatry. Before his appointment to Brockville, Dr. Forster was assistant medical Superintendent at the London, Kingston and Mimico institutions.

Dr. J. C. Mitchell, Assistant Medical Superintendent at the Hospital for the Insane at Hamilton, has been promoted to the position of Medical Superintendent at Brockville. He formerly was Assistant Superintendent there. Dr. Mitchell entered the Ontario service in 1902 at Toronto. He is a graduate of Trinity, and has also taken post-graduate work in psychiatry in Europe.

Dr. F. M. Neely, Assistant Physician at Brockville institution, has been promoted to be Assistant Medical Superintendent.

Dr. P. McNaughton, Assistant Medical Superintendent at Brockville, has been transferred to a similar position at Hamilton.

We extend our congratulations to Dr. Clarke on his appointment and wish him, in the heartiest manner, success in his new sphere of duty. W. A. Y.

ACADEMY OF MEDICINE ELECTIONS

The following Fellows of the Academy of Medicine, Toronto, will assume office for the ensuing year:

President, Dr. N. A. Powell.

Vice-President, Dr. R. A. Reeve.

Hon. Secretary, Dr. Harley Smith.

Hon. Treasurer, Dr. W. A. Young.

Past President, Dr. Albert A. Macdonald.

Council, Doctors John Ferguson, John Malloch, H. J. Hamilton, J. F. W. Ross, W. P. McKeown, A. McPhedran, F. N. G. Starr and E. E. King.

Chairmen of Sections, Medicine, Dr. Graham Chambers; Surgery, Dr. H. A. Bruce; Pediatrics, Dr. J. T. Fotheringham; Pathology, Dr. J. J. McKenzie; Ophthalmology, Dr. C. Trow; State Medicine, Dr. J. W. S. McCullough.

PERSONALS

Major D. W. McPherson, the Commanding Officer of No. XI. Field Ambulance, of the Toronto Garrison, has been promoted to a lieutenant-colonelcy.

Lt.-Col. J. T. Fotheringham has been detailed for duty with the Coronation Contingent as Medical Officer of Dismounted Troops. He reports for duty at Quebec on May 23rd and will be back about July 15th.

We heartily congratulate Dr. W. E. Gallie, of 143 College St., on having successfully passed last month his primary examination for the degree of F.R.C.S. England.

Correspondence

The Editor cannot hold himself responsible for any views expressed in this Department.

Little Current, May 13th, 1911.

To the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY:

DEAR SIR,—If you will kindly allow me space in your valuable Journal I shall endeavor to show to the medical practitioners of the Province of Ontario what protection they may expect to get from this wonderful institution called the College of Physicians and Surgeons.

About the 1st of September, 1910, a firm in Sault Ste. Marie began the construction work on the Manitoulin and North Shore Railway, between Little Current and White Fish River, a distance of 18 miles, and, for reasons best known to themselves, contracted with a physician in Sault Ste. Marie to attend to the sanitary inspection of the camps and give medical and surgical attendance to the men employed; but as Dr. McLean was at least 150 miles away from the works, he employed another medical man, who is legally qualified to do the work for him; but he was not satisfactory, being too expensive, I presume, and he was dismissed and the services of a medical student were secured. About the end of January, 1911, the student was summoned to appear before Police Magistrate Price; but, owing to the fact that it could not be proven that he was receiving any remuneration for his services, the case was dismissed and Mr. Student went back to attend to his "practice." In March, Detective Rose, an officer of the College of Physicians and Surgeons, came up to prosecute the student, and again had him summoned; but, before the case came off, the Representative of the Medical Council for this Division, found out that Rose was here prosecuting and he immediately telegraphed him to stop proceedings and come to the Soo and see him which he did and at once the ball stopped rolling, and nothing more was heard of the case until I wrote the Medical Registrar, Dr. Bray, enquiring if this state of affairs was going to be allowed by the College of Physicians and Surgeons and

he replied that he had placed my communication in the hands of the Executive Committee and, as soon as they would report upon it, he would advise me, and he most certainly did both advise and surprise me by the following decision of the President of the Medical Council:

(Copy.)

Toronto, April 1st, 1911.

To Whom It May Concern.

By the power invested in me as President of the Medical Council (see Sec. 60 of the Medical Act) I order all proceedings against ———————— in any prosecutions under this act stayed until the next meeting of the Council as the circumstances warrant me so doing in this case.

(Signed) J. W. Lane,

President Council of the College of Physicians and Surgeons of Ontario.

[seal]

Sec. 60 of the Medical Act states that the Council, by an order signed by the President, having the seal of the College appended thereto, may stay proceedings under this act where it is deemed expedient. Now what are the circumstances in this case which led the Council to stay proceedings. I must confess I do not know; but the true facts of the case I do know and they are as follows: The nearest camp on the construction work is about 7 miles and the farthest about 16 miles distant from Little Current where there are two regularly qualified medical practitioners, either one of whom could attend to the practice.

The men employed there are charged 75 cents per month for medical attendance, for which they get no value, as the medical student who was employed has, of course, no more right to practice than one of themselves.

As a result of his incompetency, two men who were unfortunate enough to have their leg fractured, had to be brought out in an open sleigh over the ice 16 miles to Little Current, then driven next day over the land and ice 24 miles to Massey, and there loaded on the train and shipped to the Soo before either leg was set.

Now surely it would have been much more humane and much more beneficial for these men to have had their limb adjusted before they left the camp as they could have had had there been a qualified man there to do the work and as there should have been as these men were paying for him.

As a member of the Council and paying two dollars per year for protection, I want to know what right this Council has in taking up the cudgel for any medical man and assisting him in taking these poor unfortunate foreigners' money and giving them nothing in return. If the Council acted honestly upon the information supplied them, the information was false and the person who gave it to them knew it to be false, for there can be no plausible excuse for taking a poor uneducated, ignorant foreigner's money for nothing.

In this district it will be either one thing or the other, either keep the law or throw the whole Medical Act to the winds, and let him who may practice, for I will fight this matter to the end, and this unprofessional, unprincipled practice of trafficking in medical students which is so prevalent in this district shall cease before I hoist the white flag.

I have written the Provincial Board of Health drawing their attention to Sec. 5 of their regulations for the sanitary control of camps, etc., which states as follows: Should it appear to the Provincial Board of Health, owing to the distance of the residence of the physician employed from the camps of the company, that the best interests of the employees are not likely to be served, it shall be competent for the said Board of Health, with the approval of the Minister of the Department, to require any employer of labor in such district to contract with some physician residing at or near the works. This section I say in this case demands action being taken by the Provincial Board of Health, as the medical man who holds the contract is at least 150 miles from the camps. I remain,

Yours truly,

P. McDonald,

Little Current.

The Physician's Library

A Manual of Cystoscopy. By J. Bentley Squier, M.D., Professor of G.-U. Surgery, New York Post-Graduate Medical School and Hospital; Surgeon to Workhouse Hospital and Home for Aged and Infirm, Department of Charities and Corrections, New York; Consulting Surgeon, New York Neurological Hospital; Fellow American Association of G.-U. Surgeons; Fellow New York Academy of Medicine; and Henry G. Bugbee, M.D., Instructor in G.-U. Surgery, New York Post-Graduate Medical School and Hospital; formerly Surgeon-in-Chief Vassar Brothers Hospital, Poughkeepsie; Fellow New York Academy of Medicine. With twenty-six original plates, eighteen of which are colored. Octavo, flexible leather, $3.00 net (sent prepaid on receipt of price). New York: Paul B. Hoeber, Medical Publisher, Bookseller and Importer, 69 East 59th Street. 1911.

This handsome little book would be useful to practitioners wishing to become familiar with the use of the cystoscope. A brief history of cystoscopic examination is given. Then follow: the technic of cystoscopy of the normal bladder with the indirect instrument; cystoscopic pictures of the normal bladder; cystoscopic pictures of the pathological bladder.

J. J. C.

Clinical Symptomatology. By Alois Pick, Professor of Medicine, University of Vienna, and Adolph Hecht, Pediatrician, St. Anne's Hospital, Vienna. Translated under the editorial supervision of Karl Konrad Koessler, M.D., Univ. of Vienna. 833 pages. 1911. $6.00. New York: D. Appleton & Co. Toronto: D. T. McAinsh & Co.

"When it is beyond our power to influence the etiologic factors, the recognition and treatment of the life-threatening symptoms become the most important task." This, in one sentence, expresses the author's views on the importance of the early recognition of symptoms, and upon that solid foundation he has

built his volume, a book that should receive a warm welcome from the American medical profession. The work is divided into 24 chapters, covering in all nearly 800 pages. In his Clinical Symptomatology Professor Pick places in the hands of medical practitioners a modern, practical and attractively written book that will be found exceedingly useful to, not only the ordinary general practitioner, but the consultant and teacher as well.

The Medical Diseases of Children. By Reginald Muller, M.D. (London), M.R.C.P., Physician to Out Patients, Paddington Green Children's Hospital. Bristol: John Wright & Sons, Ltd. 1911.

Though by no means an extensive treatise of the subject of pediatrics, this book is not only essentially practical, but sufficiently lengthy to give its readers the most modern views, attractively written, on diseases of children. It is well illustrated, and from the publisher's standpoint, creditably turned out.

The Cancer Problem. A Statistical Study. By C. E. Green, F.R.C.S. Edinburgh: William Green & Sons. 1911.

This volume, as will be observed, is not written by a medical man, but by a scientist who is deeply interested in the problem in hand. The author makes a statistical study of the cases of cancer which come to a fatal issue, and has tabulated these cases so as to indicate the occupation of the different individuals affected. He finds that the chimney sweep has by far the highest mortality figure of all trades, but that during the last twenty years the percentage among chimney sweeps has decreased, whilst that of all other trades has increased. The writer concludes that soot or some other product of combustion is an active agent in the production of cancer, and the decrease in mortality in recent years is probably due to the fact that children or young persons under the age of twenty-one have not been allowed to take part in the cleaning of chimneys. It is noted, however, that coal dust has no effect upon a coal miner, and after a careful analysis of other trades, e.g., brewer, furrier, seaman, tin plate manufacturer, chemical manufacturer, lead worker, India rubber worker, etc., the writer concludes that in all of these sul-

phurous acid or sulpho acids are present, and he suggests that in some way these chemical substances have some connection with the development of cancer, which possibly is of considerable significance. The author also has an interesting chapter on the local incidence of cancer, and he finds that the mortality from cancer is greater in towns lying low, such as in a valley between hills. He argues that the position of such towns will favor the accumulation of products of coal combustion in grates and chimneys and that under such circumstances sulphurous acid or sulpho-acids may accumulate in the dwelling. He then goes on to deal with the hypothesis that cancer is due to a fungoid parasite akin to the myxomycetes, and he says that these fungi flourish best when brought in contact with such acid media. Lastly, in considering the possibility of a cure for cancer in the light of such theories, he suggests the possible value of calcium as a curative agent and also the use of heat for the same purpose.

The author concludes by expressing the hope that the systematic trial of the effects of calcium and of heat upon malignant disease may be investigated in a systematic fashion.

A. P.

Hygiene and Public Health. By Louis C. Parkes, M.D., D.P.H. University of London; Consulting Sanitary Adviser to H. M. Office of Works; Civilian Sanitary Member of the Advisory Board for Army Medical Services; Medical Officer of Health of the Metropolitan Borough of Chelsea; Examiner in Public Health to the Royal Colleges of Physicians and Surgeons, London; Fellow of the Royal Sanitary Institute; and Henry R. Kenwood, M.B., F.R.S. Edin., D.P.H. Lond., Chadwick Professor of Hygiene in the University of London; Medical Officer of Health and Public Analyst of the Metropolitan Borough of Stoke Newington; Examiner in Public Health to the Royal Colleges of Physicians and Surgeons, London; Fellow of the Royal Sanitary Institute. Fourth edition, with illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1911.

The subjects discussed in *Hygiene and Public Health* are subdivided into thirteen chapters, which are subdivided as follows: I., Water; II., The Collection, Removal and Disposal of Excretal and Other Refuse; III., Air and Ventilation; IV.,

Warming and Lighting; V., Soils and Building Sites; VI., Climate and Meteorology; VII., Exercise and Clothing; VIII., Food, Beverages and Condiments; IX., The Contagra-Communicable Diseases and Their Prevention—Hospitals; X., School Hygiene; XI., Disinfection; XII., Statistics; XIII., Sanitary Law and Administration—Index. There are eighty-six figures. The information given on the various subjects treated of in the book is quite modern and trustworthy. The authors are to be complimented on the fourth edition of their work, which is universally recognized as a most valuable text-book. J. J. C.

Enlargement of the Prostate. Its Treatment and Radical Cure. By C. Mansell Moullin, M.D., Oxon., F.R.C.S., Vice-President of the Royal College of Surgeons; Consulting Surgeon to the London Hospital; Late Examiner in Surgery at the Universities of Oxford and Cambridge; Lecturer on Surgery at the London Hospital; Radcliffe's Travelling Fellow and Fellow of Pembroke College, Oxford and Hunterian Professor at the Royal College of Surgeons. Fourth Edition. London: H. K. Lewis, 137 Gower Street, W.C. 1911.

This work is well known to the profession as a very useful and valuable exposition of the present status of the operative and non-operative treatment of enlargement of the prostate. The author describes both the suprapubic and the perineal method of removal of the prostate, and he is rather inclined to favor the latter operation, unless conditions exist in the individual, which would suggest the one method rather than the other. Mr. Moullin also believes that Bottini's operation is of some service as a palliative procedure in the early stages of the disease, e.g., in those cases in which irritability of the bladder is a prominent feature. A. P.

Medical Jurisprudence, Forensic Medicine and Toxicology. By R. A. Witthaus, A.M., M.D., Professor of Chemistry, Toxicology and Medical Jurisprudence in Cornell University, and Tracy C. Becker, A.B., LL.B., Counsellor at Law; Professor of Criminal Law and Medical Jurisprudence in the University of Buffalo. With the collaboration of August Becker, Esq.; A. L. Becker, Esq.; Chas. A. Boston, Esq.; Hon. Good-

win Brown; W. N. Bullard, M.D.; G. C. Graham, M.D.; J. Clifton Edgar, M.D.; Jas. Ewing, M.D.; E. D. Fisher, M.D.; A. S. Geyser, M.D.; J. C. Johnson, M.D.; D. S. Lamb, M.D.; H. P. Loomis, M.D.; W. Boutten, M.D.; Roswell Park, M.D.; J. Parmenter, M.D.; Irving C. Rosse, M.D.; E. V. Stoddard, M.D.; George Woolsey, M.D.; J. H. Woodward, M.D. Second edition. Volume four. New York: William Wood & Co. 1911.

We have been looking for some months for volume four of this, one of the most important works on medical jurisprudence and forensic medicine published in many years. As our readers will notice, the title page bears the names of medical men and authors of considerable renown, some among the most prominent in America. This volume is devoted to Toxicology, the author having divided it into General Toxicology, Special Toxicology, Mineral Poisons, Metallic Poisons, Vegetable Poisons, Animal Poisons and Synthetic Poisons. After carefully perusing the book, we can but repeat what we have already stated in print, viz., that "Witthaus and Becker" should be in the hands of, not only every criminal attorney, medical jurist and coroner, but ready for consultation by the large body of the profession who so frequently have to deal with this important subject.

W. A. Y.

The Treatment of Syphilis by the Ehrlich-Hata Remedy (Dioxy-diamido-arseno-benzol). A compilation of the published observations. By Dr. Johannes Bresler, Chief Physician to the Provincial medical establishment at Lüben, Silesia. Second edition much enlarged with the portraits of Ehrlich and Schaudinn. Translated by Dr. M. D. Eder, with an abstract of the most recent papers. London: Rebman, Limited, 129 Shaftesbury Ave., W.C. New York: Rebman Company, 1123 Broadway. Price, $1.00.

This little work is well worth careful reading by any one who has to deal with syphilis. The observations on the treatment of syphilis in its various stages, and of paralysis and tabes of syphilitic origin by salvarsan, are here carefully recorded by many of the best continental observers, such as Alt, Finger, Fischer, Neisser, Treupel, Hoppe, Heubner and many others.

Besides reports of cases, some practical recommendations are

made by some of the observers. For example, Prof. Alt suggests that a serological examination should be made of all prostitutes and inmates of reformatories, and where positive, followed by compulsory treatment by 606. Breisgan reports on the successful treatment of the nursing infant through the mother. Neisser thinks it should be used in all cases of tabes and paralysis where there are recent symptoms. W. J. W.

The Treatment of Syphilis With Salvarsan. By Sanitaterat Dr. Wilhelm Wechselmann, of Berlin, Medical Director of the Skin and Venereal Disease Section, Rudolph Virchow Hospital, Berlin. With an introduction by Professor Dr. Paul Ehrlich, of Frankfurt-on-Main, Director of the Royal Institute for Experimental Therapeutics, Frankfurt. Only authorized translation by Abr. L. Wolbarst, M.D., of New York, Consulting Genito-urinary Surgeon, Central Islip State Hospital; Visiting Genito-urinary Surgeon, People's Hospital; Professor of Genito-urinary Diseases, New York School of Clinical Medicine, etc. With 15 textual figures and 16 colored illustrations. New York: Rebman Company, 1123 Broadway. London: Rebman, Limited, 129 Shaftesbury Avenue. Price, $5.00.

This is a critical review of the collective experiences with salvarsan. The methods of preparation, both for the intramuscular and intravenous methods, are carefully described. All the advantages and otherwise of the various methods of administration are clearly stated.

The first intramuscular injections being painful methods were adopted to obviate this, and now the preference is given to the intravenous method. A great deal of doubt existed as to the use of salvarsan where there were optic nerve troubles, but it was found the remedy acted promptly and well in these very cases, especially when mercury and iodides had failed.

The question of repetition of treatment is considered, and theories given which seem reasonable for the single dose not thoroughly destroying the spirachetes. The 16 colored illustrations, giving appearances before and about eight to ten days after the use of salvarsan, are very instructive, and give one a good idea of the wonderful effects of this new remedy.

W. J. W.

What Shall I Eat? A Manual of Rational Feeding. By Dr. F. X. Gourand, Formerly Chief of the Laboratory of the Medical Faculty of Paris. With a preface by Prof. Armand Gautier, of Paris. Only authorized translation into the English language by Francis J. Rebman, with a glossary containing definitions of the principal technical terms, and an index of diseases referred to in the text. New York: Rebman Company, 1123 Broadway. Price, $1.50.

This is a work of 379 pages, including a comparative table, alimentary proportions showing the amount of fats, carbohydrate, albumin, ash and water in the various foods. A glossary of technical terms and a table of diseases with the page on which the diet affecting the disease is mentioned.

There is also a short table of approximate equivalents of metric weights and measures.

The composition of the various foods is given in albumin, fats, carbohydrates and ash with their available caloric values.

There are many hints given as to the best methods of preparation and reasons for using or rejecting the various articles in diseased conditions. W. J. W.

Foods and Their Adulteration. Origin, Manufacture and Composition of Food Products; Infants' and Invalids' Foods; Detection of Common Adulterations and Food Standards. By Harvey W. Wiley, Ph.D., Chief Chemist U. S. Department of Agriculture. Second edition, revised and enlarged, including a very complete article upon Infants' and Invalids' Foods. 100 pages of new material. With 11 colored plates and 87 other illustrations. Octavo, XII+641 pages. Cloth, $4.00 net. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1911.

It may be that, in the United States, the detection of food adulterations is not now of so great an importance as it was prior to the passing of the Food and Drugs Act. However, to the householder one of the most useful portions of this work is contained in Part XI., in which simple methods for detecting food adulterations are given in detail. The article devoted to infants' foods, showing the supreme importance of the natural supply for infants, and describing the best methods of substituting fresh cow's milk for it, will be very useful to the public.

Accurate knowledge of a suitable diet ought to be of interest and importance to all persons, as a means of preventing the onset of disease, or of assisting in recovery from it. This work is particularly suitable for the average reader, who can understand problems in dietetics, when presented in an untechnical garb.

A study of the tests given for the detection of food adulterations would be useful to physicians. The volume is adequately illustrated, as it contains eleven colored plates and eighty-seven figures. It deserves a large sale. J. J. C.

Messrs. Bailliere, Tindall & Cox's Latest Books.

Messrs. Bailliere, Tindall & Cox, Covent Garden. London, England, have recently placed on the market some of the best medical books ever issued. As the Canadian medical profession well know, this firm have the highest standing as medical publishers, and everything proceeding from their press rooms has a reputation all its own.

Their latest publications include:

Surgical Anesthesia. By H. Bellamy Gardner, M.R.C.S., L.R.C.P. (Lond.).

Aids to Bacteriology. By C. G. Moor, M.A. (Camb.), F.I.C., and William Partridge, F.I.C.

Physiological Principles in Treatment. By W. Langdon Brown, M.A., M.D. (Camb.), F.R.C.P. (Lond.).

Clinical Memoranda for General Practitioners. By Alex. Theodore Brand, M.D., C.M., Medical Officer, and J. Robert Keith, M.A., M.D., Aberd. Medical Officer.

Physical Diagnosis. By Richard C. Cabot, M.D.

Aids to Microscopic Diagnosis (Bacterial and Parasitic Diseases). By E. Blake Knox, B.A., M.D., B.Ch., D.P.H. Dub., R.A.M.C.

A Text Book of Diseases of the Ear. By Adam Politzer, M.D.

Diseases of the Ear. Albert A. Gray, M.D., C.M., F.F.P.S. (Glasg.), F.R.S.

Handbook of Diseases of the Ear. By Richard Lake, F.R.C.S., Eng.

The Optic Nerve and the Accessory Sinuses of the Nose. By A. Onodi, M.D.

Diathesis and Ocular Diseases. By A. Maitland Ramsay, M.D., F.F.P. and S. (Glasgow).

Accidents in Their Medico-Legal Aspect. By Douglas Knocker.

Aids to Forensic Medicine and Toxicology. By William Murrell, M.D., F.R.C.P. (Lond.).

Operations Upon the Uterus. By W. J. Stewart McKay, M.B., M.Ch., B.Sc.

After Results of Abdominal Operations on the Pelvic Organs. By Arthur E. Giles, M.D., B.Sc., Lond., F.R.C.S., Edin, M.R.C.P., Lond.

Gynecological Therapeutics. By S. Jervois Aarons, M.D., Edin., M.R.C.P., Lond.

Elements of Pharmacy, Materia Medica and Therapeutics. By William Whitla, M.A., M.D., LL.D.

A Text-Book of Medicine. By G. Dieulafoy.

Manual of Medicine. By Thomas Kirkpatrick Monro, M.A., M.D.

Aids to Medicine. By Bernard Hudson, M.A., M.D. (Camb.), M.R.C.P. (Lond.).

Manual of Midwifery. By Henry Jellett, B.A., M.D., Dub. Univ., F.R.C.P.I., L.M.

Operative Midwifery. By J. Munro Kerr, M.B., C.M., F.F.P.S. (Glasg.).

Military Hygiene. By Lieutenant-Colonel R. Caldwell, R.A.M.C., F.R.C.S. (Eng.), D.P.H.

Military Sanitation and Hygiene. By E. Blake Knox, B.A., B.Ch., D.P.H. (Dub.), Capt. R.A.M.C.

Organic and Functional Nervous Diseases. By M. Allen Starr, M.D., Ph.D., LL.D., D.Sc.

Insanity in Everyday Practice. By E. G. Younger, M.D. (Brux), M.R.C.P., Lond., D.P.H.

Aids to Pathology. By Harry Campbell, M.D., B.Sc. (Lond.), F.R.C.P.

Manual of Physiology. By G. N. Stewart, M.A., D.Cs., M.D., Edin, D.Ph., Camb.

A Practical Treatise on Diseases of the Skin. J. Nevine Hyde, A.M., M.D.

Student's Handbook of Intestinal Surgery. By L. A. Bidwell, F.R.C.S., Eng., Surgeon.

After Treatment of Operations. By J. P. Lockhart, B.A., M.B., B.C., Camb., F.R.C.S., Eng.

Pathological Anatomy Plates. By A. Kast, M.D.

Surgical Anatomy. By John A. C. MacEwen, M.B., B.Sc., F.F.P.S., Glasg.

The Nutrition of the Infant. By Ralph Vincent, M.D., Durh., B.S., C.P., Lond.

Radium, Its Physics and Therapeutics. By Dawson Turner, B.A., M.D., F.R.C.P., Edin., M.R.C.P., Lond., F.R.S., Edin.

Syphilis; Its Diagnosis and Treatment. By F. J. Lambkin, F.R.C.S., Colonel R.A.M.C.

An Introduction to the Study of Hypnotism, Experimental and Therapeutic. By H. E. Wingfield, M.A., M.D., B.C., Camb.

High-Frequency Currents; Their Production, Physical Properties, Physiological Effects and Therapeutical Uses. By H. Evelyn Crook, M.D., B.S., Lond., F.R.C.S., Eng.

The "Nauheim" Treatment of Diseases of the Heart and Circulation. By Leslie Thorne Thorne, M.D., B.S., Durh., M.R.C.S., Eng.

Congenital Dislocation of the Hip. By J. Jackson Clarke, M.B., Lond., F.R.C.S.

Manual of Tropical Medicine. By Aldo Castellani, M.D., Florence.

Protozoology. By Gary N. Calkins.

Wellcome Research Laboratories. By Andrew Balfour, M.D., B.Sc., F.R.C.P., Edin., D.P.H., Camb.

The Open Air or Sanatorium Treatment of Pulmonary Tuberculosis. By F. Rufenacht Walters, M.D., B.S., Lond., M.R.C.P., F.R.C.S.

Pulmonary Tuberculosis and Sanatorium Treatment. By C. Muthu, M.D., Brux., M.R.C.S., L.R.C.P., Lond.

Medical Supervision in Schools. By Edward Millar Steven, M.B., Ch.M.

The Ship Surgeon's Handbook. By A. Vavasour Elder, M.R.C.S., L.R.C.P.

Some Considerations of Medical Education. By S. Squire Sprigge, M.A., M.D., Camb.

Hemoglobinuria. By Ambrose E. L. Charpentier, M.D., Durh., D.H.P., L.R.C.P.

Age Incidence, Sex and Comparative Frequency in Disease. By James Grant Andrew, M.B., C.M., F.F.P.S.

Medical Guide and Monograph Series. Golden Rules of Diagnosis and Treatment of Diseases, Aphorisms, Observations and Precepts of the Method of Examination and Diagnosis of Disease, with Practical Rules for Proper Remedial Procedure. By HENRY A. CABLES, B.S., M.D., Professor of Medicine and Clinical Medicine of the College of Physicians and Surgeons, St. Louis; Consultant at Jefferson Hospital, St. Louis; Formerly House Physician at Alexian Brothers Hospital, St. Louis; Member of the American Medical Association, Illinois State Medical Society, etc. St. Louis: C. V. Mosby Company. 1911.

A ready reference book to assist the busy practitioner in his diagnosis, treatment and remedial procedure.

A. J. H.

Compend of the Practice of Medicine. Giving the Synonyms, Definition, Causes, Symptoms, Pathology, Prognosis, Diagnosis, Treatment, etc., of each Disease, Including a Section on Medical Diseases and one on Diseases of the Skin. By DANIEL E. HUGHES, M.D., Late Chief Resident Physician, Philadelphia Hospital; formerly Demonstrator of Clinical Medicine, Jefferson Medical College, Philadelphia. Tenth Edition. Thoroughly revised and enlarged by R. J. E. SCOTT, M.A., B.C.L., M.D., Attending Physician to the Demilt Dispensary, New York; Author of "The State Board Examination Series," etc. With 63 illustrations. 12 mo, 18 plus 878 pages. The Leather-Bound Series of Manuals. Full limp leather, gilt edges, round corners. $2.50.

There are books which have met with such a large measure of success that the publication of a new edition seems to call for more than a mere mention of the fact of reissue.

Of Hughes' "Practice" have now been published ten editions, averaging 5,000 copies each—a sale which has been exceeded by very few books on any branch of medicine.

It may be taken as self-evident that no book on any subject whatsoever could have so wide a distribution unless it had intrinsic merit. It must be, if a novel of extreme interest, if on history, both interesting and true, but if on a scientific subject, it must be practical, up-to-date, useful. No amount of adver-

tising will result in such success unless back of it is a book which physicians and students find helpful, and Hughes' is all of this.

A. J. H.

The Palisade Mfg. Co., of New York, recently sent out to every physician in the United States and in Canada, a copy of their latest brochure entitled, "Pathogenic Parasites" This brochure is certainly one of the most unique pieces of advertising we have ever seen, and we would suggest that any physician who has not already received a copy, should send his card to the publishers asking that a copy be sent to him. We congratulate The Palisade Mfg. Co. on their success in getting out so clever a piece of work.

GRAPE JUICE IN THERAPEUTICS*

The majority of the profession know of the so-called Grape Cure establishments existing in Switzerland, Germany and other countries. Such establishments have of recent years become quite popular, as there is no doubt that it has been established that many forms of gastric and intestinal trouble can be cured by such treatment. That Grape Juice can be a valuable therapeutic agent, there is little doubt. There is perhaps nothing quite as refreshing to the fevered patient as Grape Juice properly administered. This is especially the case in the warm weather, when it can be served with ice. Grape Juice, properly prepared and bottled with the care as used in the laboratories of Mr. E. D. Smith, Winona, Ontario, contains undoubted medicinal qualities, being not only exceedingly refreshing and invigorating, but mildly stimulating in character. Cases are known of typhoid fever, where no medicine has been used outside of Grape Juice, with favorable results. The attention of the medical profession is called to the Grape Juice bottled by Mr. E. D. Smith, and medical practitioners can rest assured that when they prescribe this particular brand for their patients they can make no mistake. Smith's Grape Juice sells at as low a price as any other on the market, notwithstanding the fact that it is superior to, at least, many.

*Publisher's Department.

R
11
C38
v.29

The Canadian journal of medicine and surgery

Biological
& Medical
Serials

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

UNIVERSITY OF TORONTO LIBRARY

STORAGE